NIZAM'S INSTITUTE OF MEDICAL SCIENCES
(A University Established Under the State Act)
Punjagutta, Hyderabad -500082

Open Competitive Bid (OCB)

For

Procurement of Medical Equipments

For

NIZAM'S INSTITUTE OF MEDICAL SCIENCES
(A University Established Under the State Act)
Punjagutta, Hyderabad -500082

INDEX

Description	Page No.
Newspaper advertisement	3
Pre-Qualification	5
Important limits and values of bid	6
Technical specifications	7-76
Bidding procedure	77-78
Bid evaluation procedure	79
General information to bidders	80-92
Bid letter form	93
Annexure – 1 – List of Equipments	94-96
Annexure – 2 – Performance Security Form	97
Annexure – 3 – Manufacturer Authorization	98
Annexure – 4 – Installation/Acceptance certificate	99
Annexure – 5 – Performance Certificate after installation	100
Form – A – Bidder information	101
Form – B – Turnover details of items/Products	102
Form – C – Turnover details of items/product (model offered in Bid)	103
Form – D – Past Performance details	104
Form – E – Details of service centres at Hyderabad	105
Form – F – Past Experience Certificate	106
Form – G – Financial Capacity of Bidder	107
Form – H – Declaration form	108
Form – I – Specification required & specifications proposed	109
Form – J – Check List	110-111
Form – K – Fee Details	112
Form – L – Financial Bid Form	113

News Paper Advertisement

NIZAM'S INSTITUTE OF MEDICAL SCENCES
(A University established Under the State Act)
PUNJAGUTTA :: HYDERABAD :: Telangana – 500 082

Rc.No. Plng-II/8/2/2012/TN Dt. 3.7.2015

TENDER NOTIFICATION

Pre Qualification, Technical and Financial Bids are invited from Manufacturers/Authorized Dealers for the supply and installation of the equipments mentioned in the Annexure 1 of the Tender Schedule.

Download Tender Document from www.nims.edu.in. The last date for receipt of tenders is 25/07/2015 at 4.00 PM.

Prospective bidders are advised to regularly scan through above website as corrigendum/amendments etc., if any, will be notified on the above mentioned website and no separate advertisement will be given in newspapers.

Hospital Furniture Specifications will be uploaded on or before 31/07/2015 and last date for submission of bids is 20/08/2015

Executive Registrar

A. The solution, service or material required:

A.1. Supply, installation and commissioning of Medical Equipments detailed in Annexure 1

A.2. Scope of incidental services:

Furnishing of a detailed operations and maintenance manual for each appropriate unit of the supplied goods .

A.3. Warranty Period:

Warranty is for a period of one year is as indicated in Tender Schedule.

A.4. Maintenance :

Bidder should indicate Comprehensive Annual Maintenance Cost (CAMC) and Annual Maintenance Cost (AMC) separately in the Tender Schedule for the period of 7 years beyond warranty period.

A.5. Delivery and Installation Period

Bidder shall deliver the goods/services, within 6 weeks from the date of agreement/LC and installation should be within 10 days from the date of delivery.

B.1 Pre-Qualification criteria:

- The bidder should be a Manufacturer or Authorized Dealer and should be in business of manufacture and maintenance of the tendered items for a minimum period of Three years in India as on bid calling date.

- Minimum One service centre at Hyderabad.

- Following are not eligible to participate in tender:

    - The bidders who have withdrawn their bids in any of the previous tenders of AP/TS MSIDC/NIMS during last 3 years (from bid calling date).

    - Bidders who are on black list of any Government or its agencies as on bid calling date.

    - Bidders who are declared Non Dependable by any Government or its agencies during last 3 years (from bid calling date)and declaration is in force as on bid calling date.

- The bidder should have annual turnover (Nos.) for the items/product mentioned (irrespective of brand/model) during each of three financial years of 2011-12, 2012-13 and 2013-2014

- The bidder should furnish annual turnover (Nos.) for the brand/make/model of the items/product quoted each of Three financial years of 2011-12, 2012-13 and 2013-2014as follows

- The bidder should furnish the information on major supplies made during the past under the relevant product/services and satisfactory performance for the last three **financial years**.

Note : Relevant documents in support of above should be furnished

Important limits/values related to bid

Item	Description
Bid Validity Period	90 days from the bid opening date
Maintenance Period	Warranty 1 year Post warranty 7 years
Period for furnishing performance security	Within 15 days from the data of receipt of Purchase Order
Performance security value	6% of contract value
Performance security (for warranty period) validity period	60 days beyond warranty period
Period for signing contract	Within 15 days from the date of receipt of Purchase Order
Warranty period	3 years from the date of successful installation of goods at users' site.
Minimum Up time for equipment	95 % calculated over 3 months period
AMC or CAMC Performance Security Value and validity period	10% of contract value and valid for 60 days beyond AMC or CAMC period.
Payment terms	Part payment
On delivery at user site(complete)	81%
On successful installation/commissioning (complete)	10%
Training of the Institute personnel	5%
End user certification	4%
LD for late deliveries	0.5% of value of late delivered goods per week or part there of if the delay is directly attributable to suppliers
Maximum LD for late deliveries	10% of value of late delivered goods.
Penalty for failure to maintain during warranty or Comprehensive Annual Maintenance Contract	For every reduction in up time by 1.00 % from 95%, Penalty will be 1.5 % of purchase value of that particular item
Delivery, installation/commissioning period	Within 6 weeks from the date of agreement/LC

D- Technical specification of equipments:

1. ICU EEG System:

1. The system shall be manufactured by an ISO-9001 and ISO-13485 certified manufacturer

2. 22'' Panel PC system with windows 7 OS, Touch screen Operation. Panel PC should positioned on Single Pole cart

3. High Quality 32 Channel EEG amplifier with Tethered Network mode

4. The EEG amplifier shall be equipped with a minimum of 16 bit Analog-to-Digital Converter (ADC) , Min 2 KHz Sampling , >110dB CMRR , Input Impedance of 100 M Ohms

5. The amplifier unit shall include two isolated ground and reference connections
6. System should have prune feature which can trim down EEG and /or Video before archiving to DVD.

7. System should have facility for EEG trends of Envelope Trends, Total Power Trend, RMS Trend , Spectrogram , Absolute Band Power Trend , Relative Band Power Trend , Median Frequency Trend , Peak Frequency Trend , Alpha Variability Trend , Alpha to Delta Ratio Trend , Alpha to Beta Ratio Trend ,Delta Ratio Trend etc display to view the entire recording at once using spectral display.

8. The Patient/Data Management software shall be available with optional hardware and software to provide an interface between the Patient/Data Management software and a Hospital Information System (HIS) via an HL/7 (Health Level 7) communications protocol.

2. Star Drive – DBS Application:

Star Drive Specifications		
S. No.	Item Description	Quantity
1	Star Drive Manual System	1
2	Star Array Locking Carrier	1
3	Sterile Star Array Electrode Insertion tubes frame	1
4	Sterile Star Insertion Tube Extractors 5/Pack	1
5	Sterile Lead Insertion Tube for Stereotactic frame 5/pack	1
6	Star Frame Adapter for Leksell	1

The Drive should have the below mentioned salient features:

Compatible with universal adapters like Leksell (Elekta), Radionics CRW, Leibinger ZD, Leibinger RM.
Compatible with the offset adapter (Leksell and radionics only) providing a unique feature of 49 parallel track positions
New positive locking for maximum stability and improved adaptation to major stereotactic systems
Simplified two – tube insertion system eliminates lower guide and spacer tubes
Easily accessible dials for manual adjustments
Dual scales for better visualization
Lighter weight and lower center of gravity
New extractor for easy tube removal
New Star Steri Suite

3. PORTABLE ABG MACHINE:

1. Portable or semi- portable Weight 10 kg or less
2. Cartridge based systemwith, single use catridge easily available and economical. Low sample

volume&, No Wastage of consumables, consumables stored at room temperature

3. Should provide following measurements:-

Mandatory

Blood gases –pH, PO2, PCO2

Electrolytes: Na+ K+

Calculated:

Parameters: Base excess, HCO3

Optional :

Metabolites : Urea Creatine

4. Computer Interface:

Data Entry: Touch Screen:

Output: on Screen and Print

Password Protection

Easy Operator interaction

Display of error Measurements

Trouble shooting – Quality control check codes displayed on screen

Quality check calibration – automated & manual should run at room temperature

Preparation time for setup less than 15mts

Short analysis time and measurements cycle time (At about 60sec, MCT about 3min)

Warranty – 1 yr with extended warranty

Power supply- Mains and Battery powered

Downtime minimal :Analyser replacement within 24hrs customer / Technical support service 24hrs

4. PORTABLE EEG MACHINE (32 Channel)

1. PC based system.

2. Complete Laptop with Win 7 Operating Software,, Wireless mouse and keyboard, 500GB Hard Disk, 4 GB RAM, DVD writer, Ethernet card for networking an efficient patient/data management software and data archiving facilities, facility for modem connectivity and transmission by electronic communication and DICOM compatible.
3. Number of EEG Channels should be 32, such that any two channels can be configured as Bipolar, AC or DC through software

4. Facility for simultaneous sampling of all EEG channels and multiple sampling rates.

5. Networking facility

6. DICOM compatible.

7. 24 hour monitoring

8. Facility to insert EEG Record in to power Point Presentation

Technical Specifications

1. CMRR should be > 110 dB or better
2. Noise < 2V peak to peak
3. input Impedance 100 M ohm
4. 16 bit ADC resolution voltage of 0.153 V

Acquisition software

9. Facility to combine all user defined setting into templates or protocol, for use in different
applications.
10. Facility for Individual Channel Control, Customization of Montages, along with Remote Capabilities.
11. Should display a graphical view of the current montage during the EEG recording.
12. Facility to define New Sensors should be possible as standard i.e. assign to amplifier inputs define traces in a montage, define calculated channels (Average, Source/ Laplacian) , or define trends.
13. Facility to click any point to display corresponding traces & Slide pointer to change displayed duration of the overview
14. Facility for storable list of all events placed in the recording, both automatically and manually
15. Facility to review and add events to recording traces.
16. Facility for automatic time counters and event insertion during Hyperventilation
17. Facility to control display Sensitivity for User defined value.
18. Facility to choose Low & High cut Filters along with facility to enter any user defined value.

Review software

1. Paging facility as Automatic paging, mouse controlled paging and/or key board paging
2. Playback of EEG for one or more channels.
3. Facility for Zoom /Magnify EEG trace.
4. Facility for copy &paste of EEG or Trends to report and presentation
5. Facility for viewing several recordings in tiled or cascading windows

Administration Software

Network supported patient and management software, achieve to CD or DVD, powerful search, patient folder, and workspaces.

5. Haemodialysis Machine

Machine should have facility for bicarbonate and sequential dialysis.

Machine should have NIBP facility.

Battery backup for at least 30 minutes.

Should have sodium, bicarbonate and UF profiling.

Chemical disinfection, thermal disinfection and decalcification programme.

Blood pump adoptable to universal blood tubing.

Audio visual alarms on limit violation of conductivity, blood leak, air leak, trans membrane pressure alarum, dialysis temperature alarum, dialysis can empty alarm, end of disinfection alarm, bypass alarm and blood pump stop alarm.

Should have FDA, CE, UL and BIS approved product(at least one).

Manufacture / supplier should have ISO certification.

Warranty for three years and five years CAMC after warranty supported by principal manufacturer.

6. R.O.System with capacity of 2000 liters / hour

It should have capacity to produce 2000 liters per hour post RO Water.

It should have pre-treatment plant containing multi grade filter, iron removal, char coal (twin) filter, dual softener.

It should have ultra violate sterilizer .

Should have pre-RO 5 µ micron filter for bacterial protection.

It should have rinse and back flush facility for membrane in RO Unit.

Should have BIS standard / for assembled components the quality standard should be as per approval of appropriate standard authority related to used component.

The chemical, Contaminate, endotoxin and microbial tests of post RO. Water should pass AAMI standards.

Should carry warranty of three years and five years CAMC after warranty.

Should have display of supply temperature on permeat and for RO Water.

It should have fully automatic disinfection system.

7. Portable RO System

Single patient RO system.

Out put minimum one liter per minute.

Should have plug – n – play. Controller which provides easier access to programme changes and disinfect mode.

Controller should inform of operating condition by displaying water quality readings and alarms.

Compatible with all dialysis machines.

Power input 220 – 240 VAC, 50 hz fitted with Indian plug.

Warranty for three years and five years CAMC after warranty supported by principal manufacturer.

8. Ultra Sound with Doppler probe

SPCIFICATION	ABDOMINAL	
B-mode Imaging :	Min.	Des.
Transducer : Linear array (LA), curved linear array (CLA), phased array (PA)	CLA Or PA	LA, CLA or PA
Frequency range (MHz)	2-7	2-10
Penetration (cm)	15	18
Spectral Doppler		
Transducer Linear array (LA), curved linear array (CLA), phased array (PA)	Cla	LA, CLA, PA
Frequency range (MHz)	2-5	1.5-4
Calculation of waveform indices	Manual	Auto. & Manual
Accuracy of range gate registration (mm)	< 1	< 1
Penetration (cm)	10	15
Flow Imaging :		
Transducer Linear Array (LA), curved linear array (CLA), phased array (PA)	CLA	LA, CLA, PA
Frequency (MHz)	2-5	1.5 – 4
Penetration	10	15

Frequency and type of array should be appropriate for depth and penetration.

9.

LIVER TRANSPLANT RETRACTORS
(Total 2 sets FOR BOTH DONOR AND RECEPIENT)
WITH MULTI PURPOSE BLADE KITS

SPECIFICATION DETAILS OF EACH SET IS AS FOLLOWS:

S.No.	Particulars	Size	Qty
1	H Bilateral Crossbar Hinged	11” x 8 1/2” x 11”	
2	F Bilateral Crossbar		
3	Elite II Rail Clamp w/2 Cam Joints	18”	
4	Cam I Joint - Serrated	1/2” x 1/2”	1
5	Cam II Clip-on w/Angling Head	“s”	1
6	Angling Head Wrench		2
7	18” Angled Arm	8” x 10” @ 45º	2
8	24” Angled Arm	8	
9	24” Angled Arm	8” x 16”1	
10	Crank II Clip-on w/Angling Head	10”1	
11	Malleable 13mm x 64mm	(1/2” x 2 1/2”)	2
12	Malleable 13mm x 152mm	(1/2” x 6”)	1
13	Malleable 13mm x 203mm	(1/2” x 8”)	2
14	Malleable 25mm x 203mm	(1” x 8”)	2
15	Malleable 25mm x 102mm	(1” x 4”)	2
16	Malleable 51mm x 203mm	(2” x 8”)	2
17	Malleable 64mm x 254mm	(2 1/2” x 10”)	1
18	Malleable 76mm x 254mm	(3” x 10”)	1
19	Malleable 102mm x 254mm	(4” x 10”)	1
20	Kelly 64mm x 76mm	(2 1/2” x 3”)	2
21	Kelly 89mm x 76mm	(3 1/2” x 3”)	1
22	Balfour 70mm x 76mm	(2 3/4” x 3”) w/o	Lips1
23	Balfour 83mm x 76mm	(3 1/4” x 3”)	1
24	Balfour 83mm x 76mm	(3 1/4” x 3”) w/o Lips	2
25	Balfour 30mm x 30mm	(1 1/5” x 1 1/5”)	1
26	Richardson 57mm x 178mm	(2” x 7”)	2
27	Harrington 64mm x 152mm	(2 1/2” x 6”)	2
28	St. Mark’s 64mm x 178mm	(2 1/2” x 7”)	4
29	Malleable Finger	6”	1
30	Balfour 83mm x 57mm	(3 1/4” x 2 1/4”)	1
31	Balfour 102mm x 57mm	(4” x 2 1/4”)	1
32	Balfour 114mm x 57mm	(4 1/2” x 2 1/4”)	2
33	Instrument Case	22” x 11” x 3 1/2”	1
34	Instrument Case	26” x 10” x 5”	1
35	Fenestrated 44mm x 89mm	(1 3/4” x 3 1/2”)	1

36	Deaver 25mm x 127mm	(1” x 5”)	2
37	Hill-Ferguson 32mm x 76mm	(1 1/4” x 3”)	1
38	Hill-Ferguson 25mm x 64mm	(1” x 2 1/2”)	2
39	Rectal Blade 13mm x 117mm	(1/2” x 4 3/5”)	2
40	St. Mark’s w/o Lip 64mm x 178mm	(2 1/2” x 7”)	1
41	St. Mark’s 64mm x 178mm	(2 1/2” x 7”)	1
42	St.Mark’s 64mm x 140mm	(2 1/2” x 5 1/2”)	1

10. ULTRASONIC ASPIRATOR

S.No.	Specification	Requirement
1.	Ultrasonic frequency	20-80KHz.
2.	Inbuilt systems	1. Fragmentation, 2. Aspiration & 3. Irrigation
3.	Energy generation	Pizo electric
4.	Vaccum suction	1. Internal 2. 66 cm Hg 3. Increments 10%
5.	Irrigation flow	1. Integrated, 2. Co-axial 3. 0-150 ml/min
6.	Foot switch Controls	1. Fragmentation 2. Irrigation and aspiration
7.	Hand pieces three nos	Slim, compact low Thermogenic, internal irrigation 1. 23-25 KHz macro HF hand piece (with Monopolar coagulation), short, angled, Tip Ø(outside/inside) approx. 3mm/2mm, outside irrigation, central suction. 2. 23-25 KHz macro HF hand piece (with Monopolar coagulation), short, angled, Tip Ø (outside/inside) approx 2mm/1mm, outside irrigation, central suction 3. 23-25KHz laparoscopic hand piece, Tip Ø (outside/inside) approx 3.5mm/2.5mm, inside irrigation, central suction.
8.	Console controls	The console should possess the following controls 1. Power 2. Irrigation and 3. Aspiration
9.	Container	Should have container with 2 – 3 litres capacity with level sensor & anti overflow system.
10	Accessories and spare parts	HF electrosurgical unit Integrated Monopolar function Integrated Bipolar functions Power cable

		Electrosurgery unit should be supplied with the following items: RF hand piece Earthing cable 1. Patient plate 0- Reusable 2. Monopolar cable 3. Bipolar cable 4. Bipolar forceps & RF hand piece
11.	Environmental features	Storage temperature 0-50 Working temp 20-30 Humidity up to 70%
12	Power supply	220-240 V & 50Hz Resettable over current breaker Voltage stabilizer (160-240 V) ISI stds UPS with one hour backup Maintenance free batteries
13.	Standards	FDS/CE approval ISO certification Training of staff till familiarity with machine.

11. APC COAGULATION UNIT ALONGWITH ELECTROSURGERY UNIT INCORPORATED AS A SYSTEM

SPECIFICATIONS

1. Argon Plasma Coagulation unit with Forced, Pulsed & Precise Argon Coagulation Mode and the APC should be controlled from the Electrosurgery unit.
2. Argon Unit being offered should be able to perform Non-contact procedure, with no sticking of the instrument tip to the tissue. Should offer Effective, Even surface Coagulation for uniform hemostasis and de-vitalization. Should offer better dosage Argon gas for penetration depth, Should have Minimal carbonization and smoke plume formation, minimal pollution through unpleasant odours
3. Should have adjustable Argon flow rates and Automatic monitoring of argon supply
4. Should have facility for automatic flushing of Argon gas on Startup of the Machine.
5. Should be supplied with one Argon gas cylinder and one pressure reducer
6. Microprocessor controlled Electrosurgery Unit with power output upto 300 watts with On-Screen TFT Display and a visual display of actual power delivered to the tissue
7. Electrosurgery Unit should have facility to vary the intensity of delivery by changing the Effects
8. Should have facility for Monopolar Argon supported CUT/ COAG facility.
9. The Electrosurgery Unit should offer Automatic output dosage.
10. Should have Bipolar CUT/COAG facility with specially supported precise software
11. Should be supplied with digital instrument recognition- FDA approved Vessel Sealing Instrument(Open Surgery-1 No & Laparoscopy Surgery-1 No)- i.e the Electrosurgery/ APC equipment power setting should automatically change as per the Instrument inserted.
12. Should have Auto Start and Auto Stop facility for Bipolar modes
13. Should have facility to store up to 100 programs (Surgery wise or Doctor's Name wise)
14. The above system should be of the technology that it can be integrated (in future if needed) to other operating systems like-STORZ OR1/ Wolf CORE/daVinci)
15. All the above items to be accommodated in one single Trolley

The Above Set Should Consist of the following:

1. Power Cord with inbuilt fuse for safety of the equipment
2. Operating Manual
3. Service Manual
4. Two Pedal Footswitch which can be used with APC unit/ Electrosurgery Unit
5. Neutral/Patient Plate of conductive silicon, Single Surface along with perforated strap and fastening stud
6. Bipolar Forceps-1No
7. Rigid APC Handle with 2 buttons for Cut/Coag- 1 No
8. Rigid Argon Beam applicator with inbuilt Spatula for Open Surgery
    a. (Short– 1 No, Long- 1 No)

Standards to Comply:

1. Both APC Unit & Electrosurgery Unit should be FDA Approved and have approval for
2. Electrical safety by complying to the Standard EN 60 601-1

12. RADIO FREQUENCY ABLATION:

S.No.	Particulars	
1.	Radio frequency energy generator	
2.	Accessories – Foot switch Water container Pump Connector bark	
3.	Cart and cart kit	
4.	Single and cluster electrode kits of each size one quantity at installation and able to supply electrodes of varying sizes on demand.	

Important Note: in the expert committee meeting it was suggested that instead of going for RFA system to consider buying Micro wave Ablation system
Hence the specifications of Micro wave Ablation were attached

Microwave ablation system

S.No.	**Particulars**	Qty.
1	Micro wave ablation generator	1
2.	Microwave ablation pump	1
3.	Microwave ablation cart	1
4.	Microwave ablation percutaneous antennas	1
5.	Microwave ablation surgical antennas	2
6.	Microwave ablation pump tubing and chamber	1

13. RAPID INFUSION SYSTEM

S.No.	Specification	Requirement
1.	Infusion rate	0-1000ml/min
2.	Power	Magnetic induction of heat with real time monitoring
3.	Sensors	Air bubble (2) Fluid pressure Rate Valve activation Door open
4.	Pump	Peristaltic pulsatile
5.	Portability	IV stand mount or over the unit mount
6.	Battery	Internal rechargeable portable
7.	Temperature sensor	Infrared probe
8.	Warming	Automatic uniform
9.	Computer control	Over ride protection

1 The equipment should have volumetric pump technology for delivery of fluid at any specific infusion rate on single tubing set.
2 The equipment should have magnetic induction heating system for instant heating of fluid and facilitates monitoring and display of real temperature of fluids.
3 The equipment should have dual air detection sensor for high safety of patient.
4 The equipment should have facility to detect air of fluid bags to prevent entering of air in the system.
5 The equipment should have facility of automatic air purge for removal of any out-gassed air to prevent entering to patient line.
6 The equipment should have operator controlled bolus infusion key for rapid response in critical situations.
7 The equipment should have line pressure control sensor for restriction of the flow in case of line occlusion and stop the delivery of fluids for patient safety.
8 The equipment should have re-circulate mode for pre-warming of fluids during transport.
9 The equipment should have interactive on board display system which display information about rate of infusion, total volume infused, real temperature of fluids, line pressure etc.

14. 3D LAPAROSCOPY SYSTEM

S.No.	Specification	Requirement
1.	Type	Rigid Rod Lens
2.	Degrees of endoscope	Thirty degrees
3.	Accessories	3D glasses polarized Camera holder for trolley
4.	Image management	3D Full HD CCU with USB key board 32 inch full HD 3D medical monitor 17 inches 2D monitor for documentation
5.	Light source	300W xenon
6.	Camera	Chip in camera head with 1920x1080 Progressive scan technology
7.	Standardization	CE/FDA
8.	Sterilization	Disposable drapes
9.	Electrical	As per Indian standards
10	Components	All components of single manufacturer

15. -20^{0}C Deep Freezer

- Floor model
- Capacity 300 – 400 liters
- Temperature Range -18^{0}C to -22^{0}C
- Tank material – Steel
- Number of baskets - more than one
- Temperature display monitor
- Should have suitable and Standard stabilizer

16. -80^{0}C Deep Freezer

- Floor model
- Capacity - 300 – 360 liters
- Industrial-grade hermitically sealed refrigeration compressors
- All-steel cabinet
- Foamed-in-place, CFC-free urethane insulation
- Heavy-duty counter balanced lid with key lock
- Thermal interior sublid
- Air-cooled refrigeration systems to maintain desired temperatures in warm 32^{0}C (90^{0}F) ambient conditions.

Control system:

- Digital Temperature display resolution to 1^{0}C.
- Push button set-point display

Alarm System:

- Integrated preset over-temperature safety alarm with battery back-up and audible warning of temperature deviation.

Operating Temperatures:

- Temperature range: -50^{0}C to -86^{0}C

17. Thin Layer Chromatography

(or)

TLC

TLC unit (for PG practical lab) having movable applicator with inbuilt thickness arrangement between 0 to 2mm and having the following components:

- Perspex Base to support 5 glass plates of size 20 x 10cm.
- Plate Rack Aluminium for ten 20 x 10 cm plates.
- Spreader (Applicator)
- Spotting Template
- Developing tank with lid.
- T.L.C. plates set of ten 20 x 10 cm and two 20 X 5 cm.
- Sprayer – 100 ml.

18. Manual Chromatography chamber

- Cabinet made of teak wood with glass on 4 sides and on top
- Top internal surface coated with wax
- Hinged top provided with rubber gasket
- Stainless steel trough & glass rods
- Suitable size for four filter papers of 34 x 29 cms

19. ELISA Reader & Washer

- Fully automatic, 96 wells reading
- Bichromatic optics, UV & visible six filters in each.
- On board data calculations with linear & non-linear graphs.
- Bidirectional access should be available with and without computer
- Thermal print / printer
- Automatic washer - fully automatic easy on screen programming
- Washes flat / round / strips
- Automatic detector of waste and buffer bottles

20. Hot Air Oven

- Digital display
- Capacity – 100 to 200 liters
- Ceramic insulation to prevent heat loss
- Temperature regulator
- Temperature range 50^0C to 250^0C
- Inner chamber made of S.S.
- Bench top model

21. Osmometer

Measuring Technology: freezing point.

- Automatic calibration by simple operator command
- Ice should not form in the lower cooling system
- Rapid Measuring Time
- All measurements and calculations are microprocessor controlled
- Should have minimum sample volume.
- Disposable plastic measuring vessels
- Automatic error detection and display
- Data output for transmitting the results to the laboratory PC
- Printer - date, time, sample number and result should be printed

22. PCR Machine

- Multiplex capabilities: 5 target per tube
- Thermal system: Solid-state and petlier bag
- Tube formats
- Filters – 4 filters (Minimum)
- Excitation range: 350nm to 750 nm
- Emission range: 350nm to 700nm
- Temperature change rate: Upto 2.5^0C per second
- Temperature Range: 4^0C to 99^0C
- Gel documentation system
- Suitable UPS

23. Refrigerated Centrifuge

- Temperature: -10 to + 4^0C
- Maximum Speed upto 20000 RPM
- Programmability of speed, temperature and time

  Four Rotor heads for sample size of:

  - 0.2 ml for PCR
  - 1.5ml
  - 5ml
  - 15ml
- Rotor Type – Angular and swing out.
- Temperature and speed display
- Safety lid interlock
- Imbalance detector with cut off.
- Over heating cut off for motor protection.

24. SDS PAGE System

Vertical electrophoresis unit for PG practical lab with the following:

- Glass Plates: 10 X 8 cm - 4 sets
- Comb 1mm thickness (10 wells) - 4 No's, Comb 1.5mm thickness (10 wells): 4 No's, Spacer 1mm thickness: 8 No's, Spacer 1.5mm thickness: 8 No's
- Gel casting Stand: 2 No, with required no. of Supporting clamps, screws and clips.
- Casting Side Supports: 2 No's, Supporting frames: 4 No's
- SDS PAGE Tank: 2 No with Safety Lids.
- Hamilton Syringes – 2 No’s
- Suitable programmable Power pack.

25. Semi Auto Analyzer

- 8 interference filters 340, 405, 450, 505, 546, 578, 600 & 670
- Silicon photodiode detectors
- Photometric range from 0 to 2.5 OD
- Quartz Halogen Lamp of 12V, 20W
- Less than 20 µl flow cell
- 10mm square cuvette
- Adaptor for Round glass tube.
- Peltier temperature control in step of 1^0C
- Peristaltic pump
- Minimum aspiration volume less than or equal to 200 µl
- Measurement mode: Linear and non-linear, end point and kinetic
- In built QC software.
- High resolution graphics with LCD backlight.
- USB port compatible with external connection (computer/printer/key board)
- In-built high resolution graphics printer.

26. Statistical Software

- SPSS software IBM SPSS
- Latest Version

27. Urine Analyzer

- Suitable to measure Bilirubin, urobitinogen, Ketones, blood, protein, nitrite, glucose, Ptt and Sp. Gravity.
- Wave lengths: 500 – 660 nm
- Capacity: more than 50 strips per hour
- Built in thermo printer
- Memory capacity: At least 1000 measurements

28. Water Bath

- Rectangular water bath.
- Double walled, inner wall made up of stainless steel
- Temperature regulator / digital display
- Temperature range 5^0C above ambient temperature to 99^0C
- Immersion type heater.
- Stirrer / Uniform heating
- Bench top
- Capacity
    - Width 10 – 12 inches
    - Length 12 to 18 inches
    - Depth 8 – 10 inches

29. COMPACT 17Fr 30° LENS – universal-cysto-urethroscope, with enlarged view, autoclavable, fiber optic light transmission incorporated.

30. SACHE, urethrotome **sheath, 21Fr**, with channel.

31. NEPHROSCOPE PAEDIATRIC – wide angle straight forward telescope autoclavable, with luer-lock connection for inflow, with instrument channel, fiber optic light transmission incorporated.

32. NEPHROSCOPE ADULT -wide angle straight forward telescope autoclavable, with luer-lock connection for inflow, with instrument channel, fiber optic light transmission incorporated.

33. RESECTOSCOPE SHEATH 26Fr - resectoscope sheath including tubes for in- and out flow, 26Fr, oblique beak non rotatable inner tube with ceramic insulation.

34. WORKING ELEMENTS –
WORKING ELEMENT, SET – SINGLE STEM
WORKING ELEMENT SET – DOUBLE STEM.

35. STONE CRUSHING FORCEPS - cystoscope-urethroscope – sheath, 25Fr, with obturator and 2 LUER- LOCK adaptors, adaptor, for use with outer sheaths of resectoscope sheath, stone crushing forceps, single action jaws.

36. TELESCOPE 30° - forward-oblique telescope 30°, enlarged view, diameter 4 mm, length 30 cm, autoclavable, fiber optic light transmission incorporated.

37. TELESCOPE 0°- straight forward telescope 0°, enlarged view, 4 mm, and fiber optic light transmission incorporated.

38. URETERO RENOSCOPE, LENGTH 43 CM – 4.5 Fr 6 – 7.5 Fr 8 – 9.8 Fr

39. URETERO RENOSCOPE, LENGTH 34 CM–4.5 Fr 6 – 7.5 Fr 8 – 9.8 Fr

40. VISUAL OBTURATOR – SCHMIEDT visual obturator, with channel for flexible instruments, for use with sheaths, 24/26fr.

41. 3-CHIP ENDOSCOPIC CAMERA HD Camera

42. SINGLE CHIP ENDOSCOPIC CAMERA

43. LED MONITER 26” HD

44. SACHSE MEATOTOME, WITH SCALE TO SET CUTTING SIZES 10-36 Fr

45. ELECTRO-HYDRAULIC ESWL machine having a shockwave generator with wide range of selection of three energy levels as Low, Medium & High with the facility of selection of at least 10 levels in each mode of the generator and the frequency selection of the shocks from 60 to 120 pulse / minute.

The pressure at focus should be minimum 700 bar and the maximum 1100 bar preferred).

The treatment table should be supplied along with the ESWL machine having 3 axis motorized movement controlled by wired remote control.

The product should be FDA & CE approved.

The quoted model should be compatible with any branded C-Arm Image Intensifier.

The supplier must have a good track record of supplying and servicing ESWL machine in Telangana / Andhra Pradesh for a minimum period of 10 years.

The quoted model must have been installed and working in Telangana / Andhra Pradesh for a minimum period of 5 years

46. ELECTRO SURGERICAL INSTRUMENT with monopolar, bipolar, and ultrasonic energies and with vessel sealing action useful for open, laparoscopic and endoscopic procedures.

47. SPECIFICATIONS OF 6F SEMI REGID URETEROSCOPE

Compact Fiber-Uretero Renoscope
Should have Angle of view 5^0 offset eye piece
Should have 6-7.5Fr.
Should have working length 430mm
Should have Distal tip of sheath 6Fr
Should have Oval irrigation 4.2x 4.6Fr
Should have instrument channel 1x4 or 2x2.4Fr for accessory instruments of max 4Fr.

48. The specifications for Spirometer DLCO :

System should performs the following test Capabilities;

Spirometry including FVC,SVC, MVV, pre, post and challenge
Single breath DLCO
Single breath FRC lung volume studies
Multiple breath FRC lung volume studies.
Interpretation as per ATS /ERS guidelines 2005

Flow sensor should of latest technology preferably Ultrasonic with following specifications;

Range : flow± 16L/Sec
: Volume± 12L/Sec
Accuracy : flow±2% or 0.050L/Sec.
: Volume±2% or 0.050L
Resistance : <1.5 cm H2O/l/Sec @12 l/Sec.

System should have the following analysers;

CO / CO2 Analyzer

Type : NDIR
Range : 0 – 0.35% / 0 -0.15%
Resolution : 0.0001% / 0.005%
Accuracy : < 0.001% /+/- 0.05%

Tracer Gas Sensor(He/N2)

Type : Ultrasonic transit time
Range : 0 – 0.50% / 0 -0.100%
Resolution : 0.01% / 0.05%
Accuracy : 0.05% / 0.2%

System should have 12” touch screen colour monitor

System should be calibration free at any altitude and environmental stage

System should be easily transferable for bedside testing without asking for calibration at Bedside.

System should not require any collection and re-breathing bags.

It should have true infection control and low maintenance cost.

It should have internal memory for 2000 tests

Should meet and exceeds ATS/ERS Criteria 2005

Should have CE & US FDA approval.

Should have quality certificates like ISO 9001 ISO 13485

Should have electrical safety certificates like EN 60601-1 and EN60601-1-2

System should strictly follow ATS/ ERS 2005 guidelines on interpretation

System should be compatible with existing HIS for data sharing.

should have network interface for remote servicing support.

Should have more than 20 predicted authors to choose for adult & Paediatric applications.

Should have several paediatric incentives.

Should come with free software upgrades for 5 years.

Should come with Office jet heavy duty inkjet colour printer

Standard supplies should include;

Trolley
One set of Gases
Office jet Colour inkjet printer
50 No's flow sensors
10 No's nose clips

49. The specifications for Medical Thoracoscopy :

SPECIFICATIONS:

1. **Description of Function**

A Thoracoscope is a thin, tube-like rigid endoscope instrument with a light and a lens for viewing.

2 **.Operational Requirements**

Thoracoscope with video processing and monitoring is required

3. **Technical Specifications :**

1. Hopkins rod lens telescope – outer diameter 10mm, working channel 5mm, 27 cm Direction of view should be zero degree.
2. BLAKESLEY Dissecting and Biopsy Forceps Size mm Length 5mm, Length 43cm -1 No
3. METZEMBAUM Scissors, double action jaws, curved, length of blades 15mm, size 5mm, length 43cm- 1 No
4. Forceps Insert, Dissecting and Biopsy Forceps, Single action jaws, size 5mm, length 43cm -1 No
5. Suction and Coagulation Cannula Size 5mm, Length 43cm for use with suction and irrigation handle – 1No
6. Handle with Trumpet Valve for suction or irrigation, autoclavable for use with coagulation suction tubes size 5mm -2 No's
7. Suction and Coagulation Cannula L-Shaped, Size 5mm Length 43cm for use with suction and irrigation handles- 1 No
8. Powder Blower, Rubber Insufflation bulb, Straight Sheath size 5mm Length 42cm – 1 No
9. Trocar Size 11mm with blunt tip cannula flexible with silicone leaflet lip valve, length 8.5cm – 2 Nos
10. Plastic Cannula, autoclavable for use with flexible trocars size 11mm Pack of 5- 2 Nos
11. Unipolar High Frequency cord with 4mm length 300cm
12. Single chip camera with Image sensor- ½ CCD Chip Resolution 450lines horizontal, AGC: Microprocessor Control, Min Sensitivity, it should have anti moire filter it should have automatic white balance with memory function it should have image freeze function, Electronic zoom 1-2x can be adjusted to 4 levels
13. Cold light fountain (Light Source: LED 150 watts) Complete with Fiber Optic Light Cable – 1 No

14. Cautery Machine – 1 No
15. Recording system for Camera – 1 No
16. Compatible with the video system specified.
17. Video Cart

Video processor with light source & Monitor

1. Power supply 200-240 V A/C
2. PAL type video signal. The camera should be single chip CCD with provision of recording on hard disk.
3. Controls for color adjustment, to enhancement and balance settings.
4. Controls to freeze images enhance a portion of frozen image (zoom & post-processing).
5. Patient and physician data input keyboard.
6. 21" LCD color monitor with XGA resolution.

4 Environmental factors

4.1 The unit shall be capable of being stored continuously in ambient temperature of 0 -50 deg C and relative humidity of 15-90%
4.2 The unit shall be capable of operating continuously in ambient temperature of 10 -40 deg C and relative humidity of 15-90%

5 Power Supply

5.1 Power input to be 220-240VAC, 50Hz fitted with Indian plug

6 Standards, Safety and Training

6.1 Should be FDA/ CE, UL or BIS approved product
6.2 Shall be certified to be meeting safety standard IEC 60601-2-18 part 2 Particular requirements for the safety of endoscopic equipment.
6.3 Manufactures/Supplier should have ISO certificate to Quality Standard.
6.4 Comprehensive warranty for 5 years and 5 years AMC/CAMC after warranty

7 Documentation

7.1 User/Technical/Maintenance manuals to be supplied in English.
7.2 Certificate of calibration and inspection.
7.3 List of Equipments available for providing calibration and routine maintenance support as per manufacturer documentation in service / technical manual.
7.4 List of important spare parts and accessories with their part number and costing

50. Electrical Dermatome

Purpose- Precise cutting of skin grafts from various donor sites
Nature-Electrical: Ac Mains and/or Battery operated
Suggested warranty period: 3 years
CAMC/AMC required: YES

Technical Specifications:

Graft width of at least 70mm or equivalent in inches
Facility for reducing graft width using available width reducing clamps
Runs on AC mains and/or rechargeable battery pack
Graft of varying thickness from 0.05 to 0.75 mm thick
Mains cable/Cable to operating unit/Battery pack with spare batteries as applicable
Sterilizable carrying case
Pack of spare blades

51. Hand operated skin graft meshing device

Purpose- Precise meshing of skin grafts to increase surface area
Nature- Hand operated mechanical
Suggested warranty period: 3 years
CAMC/AMC required: YES

Technical Specifications:

Rollers to permit Expansion ratios of at least 1:1.5 up to 1:4
Carriers for mounting skin graft
Sterilizable carrying and storage case
Accessories for assembly
Lubricants for cleaning

52. SPECIFICATIONS FOR NASAL ENDOSCOPE

Flexible model
30 degree viewing wide angle
3.5mm diameter or less
Up down deflection of at least 90 degree at the tip
Xenon/Halogen light source
Viewing monitor
Recording video device
Sterlizable carrying case
Fibreoptic light carrying cable 6 feet length

53. SPECIFICATIONS FOR ELECTRICALLY OPERATED MICRODRIVER WITH CUTTING TOOLS

CONSOLE WITH MOUNTS FOR 2 HANDPIECES AND FOOT SWITCH

HANDHELD MOTOR UNIVERSAL 2 IN NO STRAIGHT

HAND SWITCH MOUNTED TO MOTOR

FOOT SWITCH WITH FORWARD AND REVERSE BUTTONS

CABLE FROM FOOT SWITCH TO CONSOLE

CABLE TO HAND SWITCH 2 IN NO

Terminal attachments:

Drill attachment with quick coupling-straight short,45 degree short and 90 degree long: 3 units

K wire holder quick release mechanism 2units

Angled burr attachment medium length 1unit

Sagittal saw attachment1unit

Reciprocating saw attachment 1unit

Oscillating saw attachment 1unit

Screw insertion attachment with quick coupling 1unit

Craniotome with dura guards 1unit

Hudson attachment 1unit

Disposables for drills and saws-

Drill bits medium and long

Burrs medium and long

Oscillating, sagittal and reciprocating saws-assorted sizes and end shape

Sterilization compatible storage case 1unit

54. Technical Specification for WIC Room (Walk in Cold Room)

Walk-In-Cooler should comply with the following specification

Panels & door: External Size of the Cold Room : 2.65m x 2.65m x 2.9m (height)

Thickness of Panel:	60 mm
Insulation:	CFC free Foamed in Place Polyurethane Foam (PUF), Prefabricated.
Thermal conductivity :	0.16 K –BTU/HR/DEG F/INCH of Panel Thickness
Co-efficient of Heat Transfer:	0.366 W/m C FOR 60 mm PUF PANEL THICKNESS
Density:	36-40 KG/CU.M
Internal & External Finish:	24 SWG pre-painted GI Sheet
Door Specification:	1. Size: 34” x 78” – One No. 2. Type: Flush Type Door 3. Posi seal door closer 4. Positive Cam lift Hardware 5. Vinyl Wiper Gasket with SS Bracket Bottom of Door 6. Safety Release Exit Device for Opening Door from Inside 7. Lock Arrangement from Outside 8. Metallic Cam lock 9. FRP Door Perimeter Corners: Cove (Rounded)
Temperature Indicator:	Digital Type Temperature Indicator
Corner Panels:	12” x 12” L – Shaped
Panel Joints:	With Double vinyl Gasket

(Pre-fabricated with the panels to make leak proof joints)

Lamps: 40W, INCANDESCENT, MOISTURE PROOF – 01

Panel Design should have:

1. Walls/Corners have double bends on length for fixing sectional gaskets with return Top/Bottom of walls also has 'U' sect, Gasket. These PVC gaskets helps to accept fit of gaps between the panels and provides Air tight joints without using Silicon sealant.

2. Panel doors should be of flush type with Posi-seal door closure, brushed chrome latch strap type. Cam lift hinges.

3. Door Frame/leaf perimeter is of fiberglass plastic (FRP). FRP resists rust, scratches, Dents, impacts and distortion.

4. Corners and Floors should have radius to impeded bacterial growth.

Metallic Cam locks designed to withstand 550lbs and uprooting 750lbs maximum.
Floor Design: 100 mm EPS to be provided by supplier and concrete and stone over and above EPS will be provided by Customer
A minimum of 5 Stainless Steels racks to be provided within the cabinet.

Refrigeration system

Total refrigeration capacity: 10000 BTUH
No. of refrigeration systems: ONE

Condensing Unit

1. Compressor Type : Hermetic
2. Compressor Make : Any reputed firm
3. No of Compressors : 01 (One Nos.)
4. No of Circuits : 01 (One Nos.)
5. Compressor Power : 1400 W x (Maximum)
6. Compressor Setting : thur Thermostat
7. Total Power Consumption : 1900 W
8. Fan Diameter : 405 mm
9. Condensing Fan Motor : 1/10 H.P., 900 RPM
10. No of Condensing Fans : One

11. Condensing Coil Material : H" inner Grooved Copper tubes with Slit Aluminium
12. Row Depth : 2
13. Fins Per Inch : 8 FPI
14. Condensing Coil Face Area : 0.37 Sq. mt.
15. Size of Condensing Unit : 850 L x 335 W x 540 H mm
16. Refrigeration Capacity : 10000 BTUH at 4 Deg C Room Temperature
17. Power Supply : 230 V/1 Ph/50 Hz
18. Air Flow : 1600 CFM
19. Weight : 61 KGS (Maximum)
20. Refrigerant : R-22
21. Refrigerant Connections : Flared
22. Suction Line : 5/8 Inch
23. Discharge Line : 3/8 Inch

Evaporating Unit

1. No of Evaporators : 01
2. Air Flow Rate : 1600 CFM
3. Size (L x W x H) : 1245 x 305 x 380 mm
4. Refrigerant : R-22
5. No of Fans : Two
6. Fan Motor : 1/10 HP, 1200 RPM 2 Nos.
7. Fan Diameter : 300 mm
8. Cooling Coil : 3 Row , 8 FPI
9. Weight : 25 KG
10. Power Supply : 230 V/ 1 PH / 50 Hz
11. Mounting : Ceiling Mounted
12. Piping: Copper Piping and Cabling as required between condensing and evaporating Unit
13. Length of Copper Piping: 15 Feet
14. Operation: Through Independent Refrigeration Circuit of Condensing Units.

Other Conditions

1) The supplier company must have supplied, installed and commissioned cold rooms previously
2) The supplier company must provide service in the city for proper service for the equipment.

3) The supplier company should take care of after sales service and AMC/CAMC, which has to be provided on chargeable basis after completion of warranty as per the institute's norms.
4) The suppler must provide factory made product to be assembled at site for insulation and the refrigeration system should be pre assemble, pre tested and charged with Gas only to be fitted at site on the insulation system
5) The supplier should have ISO 9001 certification for last 5 years

55. Technical Specifications of Bio–Safety Cabinet

Type 2 A2 , 30% Fresh & 70% Re-Circulation

Type of Air Flow	Vertical Down flow
MOC	SS 304 , with 1.20 mm Thickness , No: 04 Finish.
Working Area sides covered with	6mm of Clear Polycarbonate Sheet with Supporting SS 304 Frame.
Working Table MOC	SS 304 , 1.20 mm thickness,No:04 finish , with Partly perforated .
Door MOC & Moment	6mm of Clear Polycarbonate Sheet with Supporting SS 304 Frame with Counter Weights Arrangement, to move up and Down.
Blower With Motor	Make : EMB Nadi / Dynamic Motors ,Non-FLP with Centrifugal Blowers , Statistically and Dynamically Balanced Aluminum Impeller DIDW type / Equivalent
Pre filter or Fresh Air Filter (1st Stage Filtration)	SS 304 frame with Non Woven Polyester media 10 microns down to 90% efficiency. G4 Grade ; Make : Carryair / Air tech
Supply & Exhaust -HEPA Filter (2nd stage filtration)	Aluminum anodized frame with micro fiber glass media 0.3 microns down to 99.9997% efficiency, H 14 Grade ; Make : AAF / Pyramid
Air Velocity Through HEPA Filter	90 +/- 20% fpm, Below Six Inches of HEPA Filter
Differential Pressure Gauge	0-50 mm of WC , Analogy display (dial indicator)
CFL (Light)	Make : Philips / Equivalent ; Not Less Than 300 Lux
UV Light & UV Hour Meter	UV Lamp with Digital Indication to read Burning Hours of UV Lamp.
Feather Touch Switches for	CFL Light, UV Light and Blower

Power Supply Required	Single Phase; 230 Volts ; 50 Hz
Sound Level at 1 mt away for the unit	65db 'A'
DOP Injection Port	Provided for checking the dop for the hepa filter integrity test.
Manual Increase of Blower speed	By Dimmer
Leveling Jacks	Provided
Power Outlet	2 in 1 (5&15Amps) socket to be fitted within the chamber

Other Conditions

1) The supplier company must have supplied, installed and commissioned BSL2 cabinets previously.

2) The supplier company must provide service in the city for proper service for the equipment.

3) The supplier company should take care of after sales service and AMC/CAMC, which has to be provided on chargeable basis after completion of warranty as per the institute norms.

4) The supplier must provide factory made product to be assembled at site for ducting etc to be fitted at site.

The supplier should have ISO 9001 certification for last 5 years

56. REFRIGERATOR for storage of Packed Red cell/Whole blood:

Blood Bank Refrigerator is stainless steel inner and outer body with full view glass door for observation.

automatic defrosting system

Capacity: about 300 Ltrs.

digital temperature indicator and audio visual alarm

Built in Temperature Recorder & Control unit with 7 days inkless chart recording with Battery Back up

External Stabilizer with Input and Output voltage indications should be provided.

high density CFC free Urethane Foam insulation to protect cabinet from ambient temperature fluctuations

Uniform air flow & temperature maintenance in all parts of the cabinet

forced air circulation to maintain temperature uniformity

Audio and Visual Alarms when there is Temperature deviates from the preset limit, when there is Power failure, Door in left open and when Sensor fails, temperature high and temperature low

Temperature : Temperature should be maintained between +2C and +6C

Safety lock for the doors with double glass door

Factory Calibrated Sensor - IC integrated Metallic Cap Digital Sensor

Internal lighting : Provided using flicker Free CFL

Sliding trays for the easy access ability of Blood Bags

Enclose Master Calibration done at Electronic Regional Test Laboratory (South), Department of Electronic, Government of India

Construction-Outside CR sheet with1.2mm thickness and internal stainless steel with 22G

2.REFRIGERATOR for storage of Packed Red cell/Whole blood:

Blood Bank Refrigerator is stainless steel inner and outer body with full view glass door for observation.

automatic defrosting system

Capacity: about 550-650 Ltrs.

digital temperature indicator and audio visual alarm

Built in Temperature Recorder & Control unit with 7 days inkless chart recording with Battery Back up

External Stabilizer with Input and Output voltage indications should be provided.

high density CFC free Urethane Foam insulation to protect cabinet from ambient temperature fluctuations

Uniform air flow & temperature maintenance in all parts of the cabinet

forced air circulation to maintain temperature uniformity

Audio and Visual Alarms when there is Temperature deviates from the preset limit, when there is Power failure, Door in left open and when Sensor fails, temperature high and temperature low

Temperature : Temperature should be maintained between +2C and +6C

Safety lock for the doors with double glass door

Factory Calibrated Sensor - IC integrated Metallic Cap Digital Sensor

Internal lighting : Provided using flicker Free CFL

Sliding trays for the easy access ability of Blood Bags

Construction-Outside CR sheet with1.2mm thickness and internal stainless steel with 22G

Calibration certificate with traceability should be provided.

57. DOMESTIC REFRIGERATOR For Storage Of Reagents:

- Double door
- 450- 550 litre capacity
- 2-8 degree C
- External Stabilizer

58. CENTRAL TEMPERATURE MONITORING SYSTEM:

Digital temperature display with LED with 0.1 ^{0}C graduation.

Temperature recording device:

Microprocessor control for operation with audio-visual temperature alarm function with digital monitoring display. There should be a method to check alarm display.

Seven days inkless graphic temperature recorder with range of about -80 degrees to +30 degrees with data logger with supply of free charts for a period of warranty.

Battery backup for alarm and temperature recording device.

Mounted on lockable castor wheels.

Alarm history: temperature maximum and minimum, average temperature during alarm period, duration of alarm.

About 25 probe capacity

Desirable:

Noise factor should be less than 60 decibels.

Should have compressor running time < 60-70%.

59. NEEDLE DESTROYER:

a. Should be lightweight, portable and compact

b. Housing should be moulded type, shock proof and made of ABS Plastic / Stainless Steel 304 Grade

c. Should provide a removable discharge tray made for easy disposal of syringe hubs.

d. Should have the provision to burn the needle & to cut the syringe tips.

e. Should have a High Carbon Steel Cutter to cut syringes.

f. Should be able to destroy needle in the range of 18G-24G.

g. Should be able to destroy minimum of 5 injection needles on continuous operation.

h. Should have a Heavy Duty Transformer and works on 220-240 Vac/50 Hz electric supply.

i. Should have a Power On/Off switch and an indication for power.

j. Should be properly insulated for the protection from electrical hazard.

k. Should provide with 5 Nos fuse of adequate rating.

60. PLATELET AGITATOR WITH INCUBATOR:

Capacity : 80-100 Platelets Bags holding Capacity

Temperature ; 22^0-25^0 C

Oscillation : 60-75 cycles per minute

Temperature controller ; Micro controller based Temperature controller

Agitator : 230V AC induction motor with agitating mechanism

Outer body : MS powder coated

Inner body: Stain less Steel(AISI SS 304)

Trays : Minimum 6 Removable Trays for easy handling

Chart Recorder ; Weekly circular Chart Recorder

Should have safety certificate from a competent authority CE / FDA (US) / STQC CB certificate / STQC S certificate or valid detailed electrical and functional safety test report from ERTL. Copy of the certificate / test report shall be produced along with the technical bid.

61. DEEP FREEZER TEMPERATURE RANGE: - 40^{o} C.

a. Capacity: 450 litres to 500 litres
b. Refrigeration system: Cascade, CFC free refrigeration system.
c. Display: Eye level Digital LED display
d. Alarm system: audible/visual alarm to monitor power, high/low temperatures, door open, clean gasket, low battery, hot condenser and clean filters
e. Cabinet: Heavy gauge stainless steel cabinets with rounded interior corners
f. Door: must be double door High density insulation Set point
g. Security: Key operated switch for main power and alarm.
h. Shelves: 4 interior compartments
i. Should have divider and CO2 back up system
j. Vertical orientation, single main door with multiple internal doors.

62. AUTOMATED ELISA READER:

Should have 96 wells and should have reading capability of 1 to 96 wells individually.
Should have a linear measurement range of 0 to 3.000 Abs.
Should have wavelength range from 400 to 750 nm.
Should have a photometric accuracy of ±3% or better.
Should have a resolution of 0.001Abs.
Should have variable speed plate shaking capability.
Should have easy access 8 position filter wheel
Machine should be supplied with 4 standard filters.
Should have automatic filter selection.
Should have automatic calibration before each reading.
Should have at least 6 second reading speed.
Should have facility for storage of calibration curves.
Capable of doing multi standard tests and controls.
Should have different types of blanking facility like air wise and well wise.
Should be capable of reading U, V and flat type wells
Should be capable of reading 8 or 12 well strip plates.
Should use halogen light source and two spare bulbs should be provided.
Should have internal thermal printer and 5 rolls of thermal should be supplied along with the unit.
Should have external printer connectivity option.
Should work with input 200 to 240Vac 50 Hz supply.

63. ELISA WASHER:

1. Should have capability to wash flat, U or V bottomed micro plates or 8 or 12 well strip plates.
2. Should have 8 or 12 way manifold.
3. Should have 25 wash program memory or more.
4. Should have programmable washing time, volume and soaking time.
5. Should have minimum 6 wash cycles.
6. Should have continuous operating cycle.
7. Should have residual volume less than 5µl.
8. Should have removable and autoclavable plate carrier.
9. Should have in-built vacuum and dispensing pumps to ensure accurate and quite washing.
10. Should have waste bottle with full bottle alarm or sufficient mechanism to avoid spillage and damage to equipment
11. Should have solution based wash buffer intake.
12. Should work with input 200 to 240Vac 50 Hz supply.
13. Should be supplied with online pure sinewave UPS of sufficient capacity with minimum 30 minutes back up time and dust cover for both machines.
14. Should have safety certificate from a competent authority CE / FDA (US) / STQC CB certificate / STQC S certificate or valid detailed electrical and functional safety test report from ERTL. Copy of the certificate / test report shall be produced along with the technical bid.

64. MICRO PIPETTES:

5-40 Micro litres(Single Channel)
20-200 Micro litres(Single Channel)
50-300 Micro litres(8 channel)
200-1000 Micro litres(Single Channel)

65. INCUBATOR:

1. Should be operated on 230V,50Hz single phase AC supply, and having temperature ranging from 20 to 60◦C
2. Should be double walled with stainless steel inner chamber having a minimum of two inner stainless steel shelves with holes and powder coated outer surface.
3. Inner chamber should be fabricated with ribs for adjusting shelves to convenient height.
4. Should have a minimum of chamber size of (L*B*H) of 450*450*450mm.
5. Should be provided with three side heating elements.
6. Should have air circulating fan (Which can be turn ON/OFF on demand) for uniform temperature on all shelves.
7. Should have double door with acrylic transparent door.
8. Should provide with a microprocessor based digital temperature controller with digital display.
9. Should have synthetic rubber gasket at the door.

66. LAB CENTRIFUGES:

- 16 tube capacity
- To be operational on 220-240V 50Hz Single Phase.
- Max.Speed 6000rpm
- Digital Timer Range 0-59 min.
- Configured to sit on a lab bench
- User friendly microprocessor controlled with interactive LCD display
- Menu driven 10 programme memory
- Choice high brake, low brake and costing
- Imbalance high detector with cut off
- Safety lid interlock to prevent cover opening during centrifugation.
- Automatic unique satety rotor identification system
- Speed holding accuracy 100rpm
- Self diagnosis for error

67. HOT AIR OVEN:

1. Should be operated on 230V, 50Hz single phase AC supply and having temperature ranging between 50-200ºC
2. Should be made of double walled chamber -Inner made of stainless steel SS 304 grade and powder coated outer surface.
3. Should provide with three heating elements on three sides of the equipment for uniform temperature on all shelves.
4. Should be provided with air circulating fan.
5. Should provide with a variable microprocessor based digital temperature controller with digital display and thermometer should be provided separate.
6. Should have a minimum chamber size of (L*B*H) 450*450*450 with 2 stainless steel trays with holes.
7. Should provide with air ventilations.

68. AUTOMATED BLOOD COMPONENT SEPARATOR:

The machine should perform the following without manual involvement.

Balancing
Centrifugation
Transportation
Separation and leukoreduction
Volume determination
Recording procedure and process data
Shock proof.

69. TUBE SEALER:

Di-Electric Tube Sealer. Should be a heavy duty tube-sealer. Should be for bench-topuse.
The sealing time should not be more than 2 seconds.
Sealing triggering should be automatic
Should also have extended portable hand unit
Should have indication lamps.
No warm-up time should be required.
Should ensure easy separation of tube segments after the sealing.
Should be simple to handle
To be operational on 220 to 240 V at 50 Hz.

70. The specifications for HPLC Equipment:

SPECIFICATIONS:

Quaternary Pump suitable for Micro, Analytical & Semi-Prep flow rates

- The flow rate setting range: 0.001 to 10 ml/min.
- Flow rate accuracy : ± 1%
- Flow rate precision: less than ±0.075% RSD.
- Pressure setting range: more than 5000 psi
- Maintenance kit & Automatic Rinsing kit for seal wash must be supplied.

Low pressure quaternary gradient valve

- Concentration accuracy ± 0.5%
- Maximum Mixing up to 4 solvents

Online Degassing Unit

- 4 channel degasser
- Degassed Flow Line Capacity – 380ul or better
- Operating Temperature range --- 4 to 35 deg C

DETECTORS

a. PDA Detector

- Wavelength range 190 nm - 800 nm.
- No. of diode elements – 512.
- Built-in temperature controlled flow cell – temperature range from 5 ºC above room temperature to 50ºC.
- Wavelength accuracy ±1 nm.
- Drift $< 5 \times 10^{-4}$ AU/Hour.
- Noise Level : $\pm 0.6 \times 10^{-5}$ AU.
- Flow cell volume: 10ul with 10mm path length.
- Linearity of 2.0AU (ASTM method)

b. FLUORESCENCE DETECTOR

- Light source : Xenon lamp
- Wavelength range : 200 – 650nm

- Wavelength accuracy : ± 2nm
- Wavelength reproducibility: ± 0.2nm
- S/N : Water Raman Peak S/N 1200

AUTO SAMPLER

- Injection speed: 10sec/10ul.
- Carry over : <0.005% max.
- PEEK coated needle: inner & outer surface.
- Injection Volume setting range: 0.1µl to100µl standard.
- Injection Volume accuracy : 1%
- Injection Volume Precision : 0.3% RSD
- Automatic flow line rinsing before & after injection
- Sample cooler with dehumidifier: temperature range of 4 to 40 deg. C.
- Capable of accommodating multiple volume racks – 1ml, 1.5ml, 4ml, MTP & DWP.
- **Sample vials** - 1ml , 200 No.'s

COLUMN OVEN

- Temperature control method: Block heating type
- Temperature Setting range : 4 ^{o}C to 80^{o}C
- Temperature control range : 15 ^{o}C below ambient to ambient +60 ^{o}C
- Temperature control precision: ±0.1 ^{o}C
- Ability to accommodate minimum 2 columns.

Chromatography software

- Central control of pumps, detectors, auto-injectors. Oven & complete modules of each System through software.
- Software under WINDOWS XP/7 platform on 32 bit technology
- Digital acquisition & processing system ensures speed & stability of data
- Single access point for system administration, data acquisition, post run analysis and long –term data management.
- Instrument should provide 21 CFR part 11 compliance for electronic signatures and record security

Reservoir Tray & Solvent Bottle

- Tray to place Mobile phase bottles
- Mobile phase bottle – 5 nos.

Columns

- C18 – 250mm x 4.6mm, 5um – 1no.
- C18 – 150mm x 4.6mm, 5um – 1no.

Installation Accessories

- Suitable Branded PC and LaserJet Printer
- 3KVA Online UPS with 60 minutes Battery back-up
- Sample & Solvent filtration assembly with Vacuum Pump.
- 3 Liter Sonicator with Heater.

Warranty & Service

- Suppliers have to include 2 -Years Comprehensive Warranty cost (including Spares & Service) in their main offer only.

Others

- The supplier must provide Application based training for the users on the usage of instrument and support for analysis after the installation at our site.
- The supplier must demonstrate that it has a proven appropriate set-up and capability to provide after-sales service efficiently and effectively.
- Software upgrades like version ups, if any, should be done without any cost.
- All modules must be GLP compliant
- A declaration of System Validation certificate must be provided.

71. PCR MACHINE

Technical Specifications

1. Universal Block for 96x0.2ml PCR Tube, 71x0.5ml PCR Tube, One 8x12 PCR plate/with two blocks of 64 and 32 wells each.
2. Normal PCR with sharp accuracy and with an optional gradient block if suitable to fit.
3. Gradient PCR, capable of testing different temperatures simultaneously across a gradient range of 1-20◦C
4. Temperature control range: from 4◦ C to 99◦C
5. Lid Temperature range: 37 -110◦ C
6. Block Temperature Accuracy: +/- 0.2◦C
7. Temperature control speed: approx.3◦C/s(heating) & 2◦C/s(cooling)
8. Intuitive Graphic programming with larger display.
9. Administrator and user login with or without PIN for enhanced security
10. Preprogrammed template for easy selection from protocols.
11. Adjustable ramp rate from 0.1◦C to 3.0◦C to meet critical amplification conditions.
12. Instrument status indicates the step, cycle and remaining run time during the run
13. System memory for programs
14. USB ports: for Protocol transfer, Self-test, USB, printer/mouse
15. Power save Standby function
16.Option to connect up to TWO Mastercycler nexus eco for ultimate throughput. (optional)
17. Warranty to be included.

72. 'DENATURING GRADIENT GEL ELECTROPHORESIS'

Technical Specifications

1.Vertical Electrophoretic System with relative Power Pack equipment.
2.Gradient mixer along with reservoir and mixing chambers(a minimum of 50-75 ml volume). Higher end is also preferred.
3.Glass plate dimensions for Gel(minimum standard width*height) should be from 7.5cm to 20cm in both dimensions with variations.
4.Number of wells 24-48.
5.Number of plates should be at least 2(up to 4 is preferable).
6.Multi dimension combs(both in thickness and in number of well formation modules) should be accommodated.
7.Glass plates along with spacers and accessories.
8.Tank buffer volume should be a minimum of 5lts.(Higher end is also preferred).
9.Temperature control with at least a minimum accuracy of 0.5C.
10.Accessory kits for startup and related software along with the instrument should be included. Warranty period should be mentioned.

73. THREE CHANNEL ECG MACHINE

1. Should have an integrated thermal array printer for A4 size print out of ECGs, compatable with any company thermal paper.
2. Should have basic controls like on / standby auto-manual, chart speed, ECG size, copy filter, page advance etc.
3. Should have the following ECG format selection: 3 x 4 IR, rhythm lead fixed as Lead II, manual with 3 leads.
4. Should be simultaneous 3 channel, 12 lead ECG machine.
5. Should have frequency response of 0.05 to 150 Hz.
6. Should have common mode rejection ratio (CMRR) of 110 dB or greater.
7. The battery should be capable for recording with minimum one hour backup for continuous recording in a single discharge.
8. Key board with full alphanumeric capability.
9. Machine should analyse the ECG and print the report on the paper.
10. Storage option for atleast 50 ECGs.
11. Should perform self test each time the machine is turned on.
12. Should have a baseline wander and noise filters.
13. Should have an input impedence greater than 15 Mega Ohms.
14. Display of three lead ECG on LCD screen.
15. FDA / CE Approval.
16. Sturdy movable designed trolley.
17. Good track record of service after the purchase is essential.
18. Optional Items (To be provided at free of cost)
    a) Patient cable
    b) ECG Lead
    c) ECG role thermal paper (A4) sufficient for 500 patients.
    d) Paediatric ECG leads.

74. MULTI CHANNEL MONITOR

S.No.	Specifications
1	8 channel, Modular
2	5 & 3 lead ECG; SPO2 (Pulse Oximetry)
3	2 invasive pressure (adult)
4	NIBP (adult & pediatric cuff) ST trending
5	In built battery back-up (3 hrs)
6	Communicating ports for net working
7	Medical Grade Colour Monitor 15" to 21" Screen
8	Hemodynamic & Respiratory calculations – optional
9	24 to 96 hrs trending – optional
10	Freeze function
11	Reusable Transducers 4 nos.
12	Standard Accessories (NIBP cuffs all sizes, Pulse Oximetry probe all sizes, ECG cable/leads).
13	Should operate on mains 230 V, 50 Hz and on rechargeable battery
14	Should have safety certificate from a competent authority CE / FDA (USA) / STQC CB certificate / STQC S certificate or valid detailed electrical and functional safety test report from ERTL. Copy of the certificate / test report shall be produced along with the technical bid.
15	To provide wall mounting facility
16	Equipment performance should not be affected by electromagnetic radiated or conducted through power lines from another device

75. SINGLE CHAMBER TEMPORARY PULSE GENERATOR

- Should operate on synchronus (VVI, AAI) and asynchronus (VOO, AOO) mode.
- Basic rate should range from 30 – 150 beats or above /minute
- Rapid pacing rate should be atleast 450 or above / per minute
- Output should range from 0.3 to 12 V or above
- Sensitivity should range from 0.2 to 12 mV or above
- Should operate on single 9V battery
- Battery life time should be atleast 4 weeks on continuous pacing
- Should display low battery, sensing, pacing indicators
- Protective mechanism (cover / locking system) to safeguard against accidental changes to set pacing parameters.
- Cable system should have a connector with protected pins.
- Company should quote the name, model number of the temporary pulse generators.
- Run away protection should be available
- One year warranty for the PG and connecting cable.
- Should come with hanger and arm strand
- Should be small and light weight
- The model quoted should be as the current model available in the international market.
- Should comply with international safety standards.

76. 100% ETO STERILIZER

- Sterilant used is should be 100% Ethylene Oxide.
- Volume of Steilizer 125 – 230 L / 75 – 8 C ft
- Specifications of Door
- External Chamber dimensions
  - Length
  - Height
  - Depth
- Internal Chamber dimensions
  - Length
  - Height
  - Depth
- Chamber pressure throughtout sterilization cycle
- Sterilization cycle – Dual temperature option
  Warm Cycle
  Cool Cycle
- Programmable / Microprocessor controlled operation
  - With option for manual intervention
- Touch Screen
- Continuous monitoring with printouts and visual display
- Inbuilt calibrations
- Automatic Inbuilt Aeration Cycle
- Continuous monitoring of all the vital sterilization parameters like-chamber R.Humidity, Temperature, Vaccum and time.
- Single dose Gas Cartridge
- Chamber gas concentration
- Cycle time
- Visual & Audio alarm prompts

77. NEURO-ENDOSCOPE SYSTEM

S.No	Specification	Requirement
1	Endoscope	Rigid, Rod lens based
2	Degrees of endoscope	Ninety degree angled 0º , 30º and diagnostic 70º
	Diameter of endoscope	Outer diameter upto 4.0 mm
3	Sterilization	Autoclavable.
4	Working channels (blunt trocar with Obturators)	- Optic - operating - Irrigation - Over flow 6 mm outer diameter
5	Operating Instruments	1. Scissor sharp 2. Sharp and blunt (Scissors) 3. Blunt Biopsy forceps 4. Dissecting forceps 5. Toothed forceps
6	Electrodes with cables to fit existing cautery system	- Blunt tip monopolar with cable - Pointed tip monopolar with cable - Hooked tip 45, 70, 90 degrees with cable - Bipolar electrode with cable.
7	Image management	3 CCD full HD solutions with optical and digital zooming The HD camera should be 1080 P60 with 1920 X 1080 pixels. 24 inch full HD flat screen medical monitor
8	Light source	300 W xenon light source
9	Digital documentation system	DICOM 3.0 compatible DVD recording system Complete with all accessories.
10	Holding device	Pneumatic malleable in all directions.
11	Self irrigating system for transphenoidal endoscopy	Hand controlled and foot.
12	Sterilization trey	All endoscope and accessories should be autoclavable and supplied with suitable sterilizing basket
13	Neuro Endoscopy cart	With four racks
14	All components should be of one Brand (Manufacturer). The company should be approved by US FDA.	
15	Small variations in measurements will be acceptable.	

78 . MAMMOGRAPHY SYSTEM (ANALOG)

Microprocessor controlled Mammography system for screening, diagnostic examinations, and biopsies. System should have the ability to perform survey, spot compression and magnification for detailed diagnosis. It should be capable of producing optimum image quality in sitting, standing and recumbent position at lowest possible radiation dose.
System with following technical specifications is required:

S No.	FEATURES	SPECIFICATION
1.0	**GENERATOR**	
1.1	Microprocessor controlled high-frequency multipulse X-Ray Generator	3.0 kW or higher capacity
1.2	kV range	25kV - 35kV in steps of 1kV
1.3	mAs range	3mAs - 550 mAs or more
2.0	**X-RAY TUBE**	
2.1	Anode material	Please specify
2.2	Rotating anode	Rotation speed of >3000 rpm Better preferred
2.3	Dual focal spots	Focal spot size 0.1 and 0.3mm
2.4	Max. tube current	100 mA or more
2.5	Anode heat storage capacity	150 KHU or more
2.6	Anode heat dissipation	125 MHU or more
2.7	Filter material	Please Specify
3.0	***EXPOSURE CONTROL***	
3.1	Automatic exposure control with transparency compensation and density correction	Solid state, microprocessor controlled
3.2	*User-selectable filter combinations*	Should be present
4.0	**RECORDING SYSTEM**	
4.1	Cassette size and number	18 x 24 cms(4 in no.)and 24 x 30 cms (2 in no.)
4.2	Cassette type	CR mammography cassettes along with mammography viewing software compatible with the existing CR system in the hospital to be provided by the vendor

5.0	X RAY STAND	
5.1	Counter balanced swivel-arm system	Motorized height adjustment for frontal, inverted and lateral projections and rotation
5.2	Rotation of the gantry	Motorized isocentric
5.3	Swivel range stand	Please specify
5.4	*Grid*	Reciprocating grid with ratio of 5:1 with resolution of 30 lines/cm or more. Any other special grid feature, please specify
5.5	Source Image Distance (SID)	At least 65 cm
5.6	*Magnification factors*	1.5 or 1.8,geometric
6.0	**OBJECT TABLE**	
6.1	Detachable object table	with bucky for 18 x 24 cm (CR compatible cassettes)
6.2	Detachable object table	with bucky for 24 x 30 cms (CR cassettes compatible)
7.0	**COMPRESSION DEVICE**	
7.1	Compression attachment for spot & axilla	Manual & motorized
7.2	User selectable preset optimum compression force with automatic decompression after exposure with Foot pedal for operating	Should be available
7.3	Compression plate with low edge	18 x 24 cms
7.4	Compression plate with low edge	24 x 30 cms
7.5	Detail or spot compression plate	For use with 18 x 24 cm object table
8.0	**BIOPSY ATTACHMENT**	
8.1	2D biopsy attachment	With shadow cross biopsy device and biopsy compression hole plate should be provided
8.2	Accuracy	Specify accuracy for 100 mm compression thickness in x, y and z axis.
8.3	Needle lengths accommodated	Specify

8.4	Needle guide holder	If necessary should be supplied as standard
9.1	Lead barrier with lead glass	One number
9.2	Mammography positioning chair	One number
9.3	Display Monitor System -	Two numbers of 5 MP(five Megapixel) medical grade monitors with LCD technology, of at least 21 inches portrait dimensions, with resolution of 2048 X 2560 or more, 1024 shades of grey and DICOM calibrated luminance of >600 cd/m^2 with DVI video input signals (Barco, Wide or Ezio make) to be provided
9.4	'Ultralight' lead aprons (Mavig or Kiran make)	2 numbers
9.5	Cabinet for storing system related hardware (Godrej or equivalent make)	One number
9.6	Latest generation PC with 19" TFT LCD monitor with slim tower CPU with CD/DVD drive (HP or Dell make)	One number
9.7	Latest generation laser printer for report generation (HP make)	One number
10.0	WARRANTY	As per NIMS guidelines.
11.0	**COMPREHENSIVE ANNUAL MAINTENANCE CONTRACT**	As per NIMS guidelines.
12.0	**MISCELLANEOUS**	
12.1	System approval with Quality control agencies	CE certified & FDA approved system only should be quoted (Certificates to the effect should be enclosed)
12.2	Approval from AERB / BARC for the said model	Should be available (Certificates to the effect should be enclosed)
12.3	Original printed data sheet from manufacturer	No exception will be permissible on this account. Offers will be summarily rejected if the above terms are not complied with
12.4	Installation base for similar equipment in India	Supply list with contact numbers for reference, if any

79. C- ARM SPECIFICATIONS

1. Generator
   a) Microprocessor controlled High Frequency generator with 2.5 Kw or More with Integrated beam filters to reduce patient skin radiation dose.

2. Collimator : IRIS or multi leaf

3. X-ray mode (kV & mA range) KV – range 40 – 110 KV

   Fluoroscopy:
   a) Fluoroscopy should not exceed 5 mA
   b) Pulsed Fluoroscopy with last Image Hold

   Radiography:
   a) Radiographic mode for cassette exposures: minimum of 20 Ma

4. Image Intensifier:
   a) 9" or more Triple Mode Image Intensifier with CCD Camera

5. Image Processing:
   a) Minimum 12 bit Digital Fluoroscopy Imaging Unit with dedicated video pipe-line processor.
   b) Archival memory CD/DVD mode and USB
   c) Detachable Cassette holder for film recording
   d) Memory for 10000 images must be available in the hard disk

6. Image Display:
   a) Two 19" TFT / LCD High resolution, high contrast and flicker free Monochrome Monitors of at least 1024 X 1024 matrix with automatic adaptation of monitor brightness to ambient light
   b) LIH (Last image hold) with digital image rotation, reversal, inversion, pixelshift, image annotation, measuring of distances and angles should be available
   c) High resolution, high contrast, specially suitable for specialized orthopaedic trauma (pelvic and acetabular fracture), spine surgeries and complex bone tumor surgeries.

7. System Functionality:
   a) Vertical, Horizontal and Orbital Travel should be available C-arm rotation 135 degree or more

8. The System should be DICOM ready with capability of send, receive, store and print functions

9. Accessories:

a) Wrap around light weight vinyl Lead Aprons with 0.5 mm lead equivalence certified by BARC or AERB or ISO: 2 (Two Nos.)

10. Certification:
    a) The complete unit should be BARC/AERB type approved.
    b) Periodic certification of the C arm every 6 months by BARC / AERB till the end of warranty and 7 years CAMC thereafter (total 8 years from the date of purchase.

11. Radiation hazard – complete unit should be BARC / AERB approved. Specify the amount of radiation emitted per exposure. The C-Arm unit with least radiation emission will be preferred.

12. Warranty:
    a) Comprehensive WARRANTY for one year of complete system including X-ray tubes and all vaccumatic items and accessories.
    b) CMC for seven (7) years for complete system including X-ray tubes and all vaccumatic items and accessories after warranty period
    c) Maintenance: complaints to be attended within 24 hrs and rectified immediately. Standby C arm to be provided if the repair/rectification is delayed more than 24 hrs.

13. C-arm Cart:	1) Source entrance distance SED	1) 90 cm
	2) C-arm rotation	2) 120 Degrees
	3) C-arm axial rotation	3) 300 / - 120
Degrees	4) C-arm up, down travel	4) 45 cm
	5) C-arm FWD / REW travel	5) 20 cm
	6) C-arm swiveling	6) $\pm$ 12.5 Degrees

Easy mobility and easy portability

14. X-ray Generator:	1) Control system	1) Inverter system
	2) Fluoroscopic tube current	2) Maximum 9mA
	3) Exposure rate	3) 2 – 15 FPS (EIA) 1.7 – 12.5 FPS (CCIR)
	4) Radiographic tube current	4) Maximum 20 mA
	5) Radiographic voltage range	5) 40 - 110 K.C
	6) Radiographic mAs	6) 200 mAs

15. X-ray Tube:	1) Focus size	1) 0.6 mm
	2) Thermal capacity	2) 100 kHU
	3) I.I	3) 9 inch

16. X-ray T.V System:	CCD Camera	1) EIA 525 lines 2) CCIR 525 lines 3) Inter race

17. Power supply:	Single Phase	100,110,120 Volts ± 10% or 200,220,230,240 V ± 10% 50, / 60 HZ 3.5 kVA

Section E

Bidding procedure :

E.1.
Bids shall be submitted in three parts , Pre Qualification Bid, Technical Bid and Financial Bid.

E. 2. Preparation of Pre-qualification bid
It shall contain of the following parts:

- General business information
- Turnover details
- Major clients' details
- Service centre details
- Past performance details
- Declaration Form
- Financial Capacity of bidder
- Bid security (EMD)
- Processing fee & **cost of tender schedule**
- Any other information required as per Tender Schedule.

E.3 Preparation of technical bid
It shall consist of the following parts.

- Technical documentation - confirmation to technical specifications etc.
- Plan for in lab proof of concept, if required in tender call.
- Plan for field demonstration if required in tender call
- Detailed technical documentation, reference to various industry standards to which the goods and services included in vendor's offer conform, and other literature concerning the proposed solution. In particular, the vendors should identify areas in which their solution conforms to open standards and areas that are proprietary in nature. Justification about proprietary components in terms of functionality and performance should be given.
- A statement about appropriateness of the product design and solution plan for operating conditions in India, including physical, infrastructure and human factors.
- In the case of a bidder offering to supply goods under the contract which the bidder did not manufacture or otherwise produce, the bidder has been duly authorized by the good's manufacturer or producer to supply the goods in India

- A statement of the serviceable life of goods and services offered by the firm. Available sources of maintenance and technical support during the serviceable life. Available sources of spare parts, special tools, etc. necessary for the proper and continuing functioning of the goods and services, for the serviceable life.

E.4 Preparation of financial bid

Overview of financial bid

The financial bid should provide cost calculations corresponding to each component of the requirements.

- **Bid prices:**
  - The bidder shall indicate the unit prices and the total bid price of the goods/services it proposes to supply under the contract. Bid prices shall be rounded off to nearest rupee.
  - **The prices should be quoted in Indian Rupees**.
  - The bidder shall indicate Basic Prices and taxes, duties etc. (if required)
  - Bidder's separation of price components will be solely for the purpose of facilitating the comparison of bids by NIMS and will not in any way limit the purchaser's right to contract on any of the terms offered.
  - Prices quoted by the bidder shall be fixed during the bidder's performance of the contract and not subject to variation on any account. A bid submitted with an adjustable price quotation will be treated as non responsive and will be rejected.
  - However variation in VAT/CST/Service Tax/Excise Duty from the date of filing bid up to the period of contract will be adjusted accordingly. Hence Bidder must specify the value of VAT/CST/Service Tax/Excise Duty, as the case may be, which has been included in the bid price.
  - Any variations in taxes and duties on account of central/state Government decision such increases will hence be compensated and in case of reduction during the period of contract, such reduction will reduce the taxes payable to the suppliers.
  - The bidder should note that the quoted price should include all duties, taxes, freight, transportation, insurance etc., including customs duty and clearance charges.
  - In case, the prices are quoted in foreign currency, the exchange rates as applicable on the last date of closing the bids shall be taken for comparison of tenders.
  - During the evaluation of financial bids, if discrepancy is noticed between the figures and the words, the later only will prevail.

E.5. Pre-bid Meeting:

All the prospective bidders can participate in the Pre Bid meeting to seek clarifications on the bid, if any. Pre Bid meeting will be held in NIMS for the items specified as per the date notified.

Section F

F. Bid evaluation procedure:

Bids would be evaluated for entire Schedule. Bidders should offer prices for all the items of a Schedule and for the full quantity of all items in a Schedule failing which such bid will not be considered for evaluation. If a vendor has any comment to offer about the procedural aspects of this tender, it should be intimated to NIMS during the pre-bid meeting in writing. In case the schedule or procedure of tender processing is revised, the revised schedule or procedure shall be binding on all. No personal communication will be sent to bidder but the changes will be notified in the nims website www.nims.edu.in. The bidders will download the same.

F.1. Opening of bids:

Immediately as per the schedule date and time after the tender closing time, the committee constituted by NIMS shall open the pre-qualification bid, and list them for further evaluation. The Technical bids of only those bidders who qualify in the pre-qualification bid will be opened. After evaluation of technical bids, the financial bids of only those bidders who qualify in technical evaluation will be opened. Any participating vendor may depute a representative to witness these processes. No personal communication to the bidders. The bidders should watch the nims website www.nims.edu.in for any notices.

F.2. Pre-qualification bid evaluation:

The Pre-qualification Tender Schedule shall be evaluated in two steps. Firstly, the documents furnished by the vendor shall be examined prima facie to see if the technical skill and financial capacity are consistent with the needs of this Institute. In the second step, NIMS may ask vendor(s) for additional information, for discussions with their professional, technical personnel.

F.3. Technical bid evaluation:

Technical bid shall be evaluated again in two steps. Firstly, the documentation furnished by the vendor shall be examined prima facie to see if the product /services offered, technical are consistent with the needs of the department. In the second step, NIMS may ask vendor(s) for additional information, for arrange discussions with their professional, technical personnel.

F.4. Financial bid evaluation:

Final choice of firm to execute the order for supply of equipment shall be made on the basis of conformity to pre- qualification, technical specifications, appropriateness of the product offered, capability of bidder to execute and service the equipment and appropriateness of financial offer from the point of view of cost-effectiveness over the entire maintenance period for the product/services.

Section G

General information to bidders.

G.1. Definitions:

- **Pre- qualification and Technical bid** means that part of the offer, that provides information to facilitate assessment by NIMS, professional, technical and financial standing of the bidder and conformity to requirements.
- **Financial Bid** means that part of the offer, that provides price schedule and total costs including taxes etc.
- **Three part Bid** means the pre-qualification bid, technical and financial bids and their evaluation is sequential.

G.2 General eligibility

- Subject to Pre-Qualification conditions, this invitation for bids is open to all firms both from within and outside India, who are eligible to do business in India under relevant Indian laws as are in force as on bid closing date.
- Bidders marked by AP/TS MSIDC/NIMS to be ineligible to participate for non-satisfactory past performance, corrupt, fraudulent or any other unethical business practices shall not be eligible.
- Breach of general or specific instructions for bidding, general and special conditions of contract with NIMS may make a firm ineligible to participate in bidding process.

G.3 Cost of bidding

- Bidder is expected to examine all instructions, forms, terms, and specifications in the bidding documents. Failure to furnish all information required by the bidding documents or to submit a bid not substantially responsive to the bidding documents in every respect will be at the bidder's risk and may result in the rejection of bid.

G.4 Amendment of bidding documents

- At any time prior to the deadline for submission of bids, NIMS, for any reason, whether at its own initiative or in response to a clarification requested by a prospective bidder, may modify the bidding documents by amendment.
- Amendments if any shall also be binding on all prospective bidders. Even those who have already received/down loaded the bidding documents.
- All the amendments will be notified in the NIMS website www.nims.edu.in only.
- In order to allow prospective bidders reasonable time to take the amendment into account in preparing their bids, the NIMS, at its discretion, may extend the deadline for the submission of bids.

G.5 Period of validity of bids

- Bids shall remain valid for the 90 **days**.
- In exceptional circumstances, the NIMS may solicit the bidders' consent to an extension of the period of validity. The request and the responses thereto shall be made in writing. The bid security shall also be suitably extended. However a bidder granting the request will not be permitted to modify its bid.

G.6 Submission of bids

- Seperate Bid has to be submitted for each equipment with tender schedule fee, processing fee and relevant EMD.
- The bidders shall seal the pre-qualification bid, technical bid and financial bid as the case may be in separate envelopes, duly marking the envelopes as "Pre-qualification", "Technical bid", "Financial bid", as the case may be.
- The envelopes shall then be sealed and put in an outer envelope. The inner and outer envelopes shall be addressed to the Director, Nizam's Institute of Medical Sciences, Puntagutta, Hyderabad 500 082 and drop in the tender box placed in the Office of the Executive Registrar, NIMS, Hyderabad.
    - The envelope shall bear the equipment name and s**uperscribe as** –
        - Pre-qualification bid **"Do not open before bid opening day and time",**
        - Technical bid **"Do not open until evaluation of Pre-qualification bid",**
        - Financial bid **" Don't open until evaluation of technical bid"**
- The outer envelopes shall clearly indicate the name and address of the bidder to enable the bid to be returned unopened in case it is declared "late".
- **Demand Drafts drawn in favour of the Director, Nizam's Institute of Medical Sciences from any scheduled bank towards Tender application fee of Rs.500/-(Rupees five hundred only) ; processing fee of Rs.2,000/-(Rupees two thousand only) and EMD for the amounts mentioned against each equipment should be submitted along with prequalification bid**.

G.7 Deadline for submission of bids

- Bids must be deposited by the bidder not later than the bid submission date and

- The NIMS may, at its discretion, extend this deadline for the submission of bids by amending the tender notice, in which case all rights and obligations of the NIMS and bidders previously subject to the deadline will thereafter be subject to the deadline as extended.

G.8 Earnest money deposit (EMD)

- The bidders should submit EMD for the amount mentioned against each equipment in the form of Demand Draft drawn in favour of the Director, NIMS issued by any nationalized bank.
- Unsuccessful bidder's EMD will be returned after finalization of tenders.
- The EMD may be forfeited:
    - if a bidder withdraws its bid during the period of bid validity or
    - in the case of a successful bidder, if the bidder fails:
    - to sign the contract in time; or
    - fails to furnish performance security in time or
    - Breach of agreement terms.

Section H

opening and evaluation of bids

H.1. Clarification of bids

During evaluation of the bids, NIMS may, at its discretion, ask the bidder, in writing, for clarification of its bid. However no change in price or substance of the bids shall be sought, offered or permitted.

H.2. Field demonstration

The bidder, on demand, shall demonstrate functional requirements of the goods/services as described in the specifications. The demonstration site will be decided by NIMS.The Technical evaluation report will be displayed on NIMS website for 1 week.

H.3. Evaluation of financial bids

Financial bids of those vendors who satisfy all phases of the pre-qualification, technical bid and corresponding to chosen technical choices will only be opened. All other financial bids will be ignored. NIMS may at its discretion discuss with vendor(s)

available at this stage to clarify contents of financial offer. **However price bids of the bidders may be compared with price finalized by other Government agencies and in case bid price is higher, bidder may be asked to match lower price.**

Equipment cost with one year warranty and seven years maintenance charges will be taken into account for arriving L1 Bidder. If AMC/CAMC is not required for any equipment, L1bidder will be arrived only on equipment price.

H.4. Contacting NIMS

- Bidder shall not approach NIMS officer(s) outside of office hours and / or outside NIMS office premises, from the time of the tender call notice to the time the contract is awarded.
- Any effort by a bidder to influence NIMS officer(s) in the decisions on bid evaluation, bid comparison or contract award may result in rejection of the bidder's offer and bidder may also be marked as ineligible for future bids. If the bidder wishes to bring additional information to the notice of the NIMS, it should do so in writing only.

H.5. NIMS' right to vary quantities at the time of award

NIMS reserves the right at the time of award to increase or decrease the quantity, as indicated in tender call, from the quantity of goods and services originally specified in the specification without any change in unit price or other terms and conditions.

H.6. NIMS' right to accept any bid and to reject any one or all bids.

NIMS reserves the right to accept or reject any bid or annul the entire bidding process and reject all bids at any time prior to award of contract, without thereby incurring any liability to the affected bidder(s) or any obligation to inform the affected bidder(s) of the grounds for such decision.

H.7. Corrupt, fraudulent and unethical practices

NIMS will reject a proposal for award and also may debar the bidder for future tenders in NIMS, if it determines that the bidder has engaged in corrupt, fraudulent or unethical practices in competing for, or in executing a contract. Here:

- "Corrupt practice" means the offering, giving, receiving or soliciting directly or indirectly, of anything of value to influence the action of a public official in the process of contract evaluation, finalization and or execution and
- "fraudulent practice" means an act or omission or misrepresentation of facts in

- “Unethical practice” means any activity on the part of bidder by which bidder tries to circumvent tender process in any manner. Unsolicited offering of discounts, reduction in financial bid amount, upward revision of quality of goods etc after opening of first bid will be treated as unethical practice.

I. General conditions of proposed contract (GCC)

I.1 Standards

The goods supplied under this contract shall conform to the standards mentioned in the specifications, and, when no applicable standard is mentioned, the authoritative standards appropriate to the goods' country of origin shall apply. Such standard shall be the latest issued by the concerned institution.

I.2. Performance security

- On receipt of Purchase Order, the Vendor shall furnish performance security to NIMS @ 6% of the cost of the equipment supplied in terms of Bank Guarantee in favour of the Director, NIMS in accordance with Tender Schedule requirement.
- The proceeds of the performance security shall be payable to the NIMS as compensation for the supplier's failure to complete its obligations under the contract.
- The performance security shall be denominated in Indian rupees and shall be in one of the following forms:
    - A bank guarantee or Demand Draft (DD), issued by a reputed bank located in India with at least one branch office in Hyderabad, in the form provided in the bidding document or another form acceptable to the Director,NIMS; or

I.3. Manuals and drawings

- Before the goods and services are taken over by the user, the Vendor shall supply operation and maintenance manuals, (together with drawings of the goods and services where applicable).
- The Vendor shall provide complete technical documentation of hardware, firmware, all subsystems, operating systems, compiler, system software and the other software.
- The manuals and drawings where ever applicable shall be in English.
- At least one set of the manuals should be supplied for each installation sites.
- Unless and otherwise agreed, the goods and services shall not be considered to be completed for the purpose of taking over until such manuals and drawings have been supplied to the user.

I.4. Acceptance certificates

NIMS is satisfied with the working of the system, the acceptance certificate signed by the vendor and the representative of the NIMS/User/BME will be issued. The date on which such certificate is signed shall be deemed to be the date of successful commissioning of the systems.

I.5. Delivery and documents

- Delivery of the goods/services shall be made by the vendor in accordance with the terms specified in the Schedule of requirements. The details of shipping and / or other documents to be furnished and submitted by the vendor are specified below.
    - **For Goods supplied from abroad:**
        - Within 24 hours of shipment, the Vendor shall notify the NIMS and the Insurance Company by cable or telex or fax full details of the shipment including contract number, description of goods, quantity, the vessel, the bill of lading number and date, port of loading, date of shipment, port of discharge, etc. The Vendor shall mail the following documents to the NIMS, with a copy to the Insurance Company.
        - Four copies of supplier's invoice showing goods description, quantity, unit price and total amount;
        - 4 copies of packing list identifying contents of each package;
        - Insurance certificate; Manufacturer's/Supplier's warranty certificate;
        - Inspection certificate, issued by the nominated inspection agency and the Supplier's factory inspection report; and
        - Certificate of origin.

  The above documents shall be received by the NIMS at least one week before arrival of Goods at the port or place of arrival and, if not received, the Vendor will be responsible for any consequent expenses.

    - **For Goods from within India**:

      Upon delivery of the goods to the NIMS, the vendor shall notify the NIMS and mail the following documents to the NIMS:
        - Four copies of the Vendor invoice showing goods description, quantity, unit price total amount;
        - Manufacturer's or Supplier's warranty certificate;
        - Inspection Certificate issued by the nominated inspection agency, and the Supplier's factory inspection report;
        - Certificate of Origin;

- Insurance policy;
- Excise gate pass,Octroi receipts wherever applicable duly sealed indicating payments made; and

The above documents shall be received by the NIMS before arrival of the Goods (except deliver note and where it is handed over to the NIMS with all documents) and if not received, the vendor will be responsible for any consequent expenses.

I.6.Insurance

It is suggested that the goods supplied under the contract shall be fully insured in a freely convertible currency against loss or damage incidental to manufacture or acquisition, transportation, storage, and delivery up to user site. The insurance should be for replacement value from "Warehouse to warehouse (final destination)" on "All Risks" valid for a period not less than 3 months after installation and commissioning.

I.7. Transportation

Transport of the goods to the project site(s) shall be arranged by the vendor at his cost.

I.8. Goods Installation

The vendor is responsible for all unpacking, assemblies, wiring, installations, cabling between goods units and connecting to power supplies. The vendor will test all hardware operations and accomplish all adjustments necessary for successful and continuous operation of the goods at all installation sites.

I.9. Incidental services

The Vendor may be required to provide any or all the following services, including additional services:

- Performance or supervision or maintenance and/or repair of the supplied goods and services, for a period of time agreed by the parties, provided that this service shall not relieve the Vendor of any warranty obligations under this Contract, and
- Training of NIMS and/or its personnel, at the NIMS/, in using goods.

- Prices charged by the Vendor for the preceding incidental services, if any, should be indicated separately (if required), and same will be mutually negotiated separately.

I.10. Spare parts

- The Vendor shall ensure availability of spares in stock at his nearest service centre for immediate delivery such spare parts as: (a) are necessary for a minimum of 10 years of operation after installation at the Purchaser's sites (b) are necessary to comply with bid requirements.

I.11. Warranty and Maintenance service

- Free maintenance services including spares shall be provided by the vendor during the period of warranty. User, at its discretion may ask the vendor to provide comprehensive maintenance services (Which will include spare parts) after warranty period, i.e. annual maintenance and repairs of the system at the rates indicated by bidder in its proposal and on being asked so, the vendor shall provide the same. The cost of annual maintenance and repairs cost (after warranty period), which will include cost of spares replaced, shall be paid in equal half yearly instalments at the end of each half year. Separate agreement for CAMC/AMC should be entered.
- The maximum response time for maintenance complaint from any of the destination (i.e. time required for supplier's maintenance engineers to report to the installations after a request call is made or letter is written) shall not exceed **48 hours**.
- The vendor will accomplish preventive and breakdown maintenance activities to ensure that all goods perform their functions without defect or interruption for at least required up time.
- In case up time is less than the stipulated up time, the penalty as indicated in the Tender Schedule shall be imposed on the vendor.
- The amount of penalty if any will be recovered at source from the Performance security during the warranty period or from Performance security submitted for maintenance period or from maintenance charges payable or both during maintenance period.
- Bidder shall submit Performance Security for AMC at 10% of contract value at least 30 days in advance of commencement of maintenance period, covering entire maintenance period and 60 days beyond it, for performing its obligation during the maintenance period. This security will be liable for forfeiture in case of failure of bidder in performing its obligation during maintenance period.
- In AMC spares to listed & cost fixed.

I.12. Payment

Payment terms	Part payment
On delivery at user site	81%
On successful installation/commissioning	10%
Training of the Institute personnel	5%
End user certification	4%

I.13. Contract amendment

No variation in or modification of the terms of the Contract shall be made except by written amendment signed by the parties.

I.14. Assignment

The Vendor shall not assign, in whole or in part, its obligations to perform under this Contract, except with the prior written consent from NIMS.

I.15. Delays in the supplier's performance

- Delivery of the Goods and performance of the services shall be made by the Vendor in accordance with the time schedule specified by the NIMS in the specifications.
- If at any time during performance of the Contract, the Vendor or its subcontractor(s) should encounter conditions impending timely delivery of the goods and performance of services, the Vendor shall promptly notify the NIMS in writing of the fact of the delay, its likely duration and its cause(s). As soon as practicable after receipt of the vendor's notice, NIMS shall evaluate the situation and may at its discretion extend the Vendor's time for performance, with or without liquidated damages.
- A delay by the Vendor in the performance of its delivery obligations shall render the vendor liable to the imposition of appropriate liquidated damages, unless an extension of time is agreed upon by NIMS without liquidated damages.

I.16. Termination for default

- The NIMS, without prejudice to any other remedy for breach of Contract, by written notice of default sent to the Vendor, may terminate the Contract in whole or in part:

- If the Vendor fails to deliver any or all of the Goods/services within the time period(s) specified in the contract, or within any extension of time thereof granted by the NIMS or
- if the Vendor fails to perform any other obligation(s) under the Contract or
- if the Vendor, in the judgement of the NIMS has engaged in corrupt or fraudulent practices in competing for or in executing the Contract.

- In the event the NIMS terminated the contract in whole or in part, NIMS may procure, upon such terms and in such manner as it deems appropriate, goods or services similar to those undelivered, and the Vendor shall be liable to the NIMS for any excess costs for such similar goods or services. However, the Vendor shall continue performance of the contract to the extent not terminated.

I.17. Force majeure

- The Vendor shall not be liable for forfeiture of its performance security, liquidated damages, or termination for default if and to the extent that its delay in performance or other failure to perform its obligations under the Contract is the result of an event of Force Majeure.
- For purposes of this clause, "Force Majeure" means an event beyond the control of the Vendor and not involving the Supplier's fault or negligence and not foreseeable. Such events may include, but are not restricted to, acts of the NIMS in its sovereign capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions and freight embargoes.
- If a Force Majeure situation arises, the Vendor shall promptly notify the NIMS in writing of such condition and the cause thereof. Unless otherwise directed by the NIMS in writing, the Vendor shall continue to perform its obligations under the Contract as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event.

I.18. Termination for insolvency

NIMS, may at any time terminate the contract by giving 30 days written notice to the Vendor if the Vendor becomes bankrupt or otherwise insolvent. In this event, termination will be without compensation to the Vendor, provided that such termination will not prejudice or affect any right of action or remedy which has accrued or will accrue thereafter to the NIMS.

I.19. Termination for convenience

- NIMS, may at any time by giving 30 days written notice to the Vendor, terminate the Contract, in whole or in part, for its convenience. The notice of termination shall specify that termination is for the NIMS convenience, the extent to which performance of the Vendor under the Contract is terminated, and the date upon which such termination becomes effective.

I.20. Resolution of disputes

- The NIMS and the Vendor shall make every effort to resolve amicably by direct informal negotiation any disagreement or dispute arising between them under or in connection with the contract.
- If, after thirty (30) days from the commencement of such informal negotiations, the NIMS and the Vendor have been unable to resolve amicably a contract dispute, either party may require that the dispute be referred for resolution to the formal mechanisms specified here in. These mechanisms may include, but are not restricted to, conciliation mediated by a third party.

- The dispute resolution mechanism shall be as follows:
    - In case of a dispute or difference arising between the NIMS and the Vendor relating to any matter arising out of or connected with this agreement, such disputes or difference shall be settled in accordance with the Arbitration and Conciliation Act, of India,1996.
    - Each party shall have the right to appoint one arbitrator and the third arbitrator shall be appointed by Indian Council of Arbitration.
    - The arbitration proceedings shall be conducted at Hyderabad in English language.
    - The award given by arbitrators shall be final and binding on the parties.

I.21. Applicable law

The contract shall be interpreted in accordance with appropriate Indian laws.

I.22. Notices

- Any notice given by one party to the other pursuant to this contract shall be sent to the other party in writing or by email or facsimile and confirmed in writing to the other party's address.
- A notice shall be effective when delivered or tendered to other party whichever is earlier.

I.23. Taxes and duties

The vendor shall be entirely responsible for all taxes, duties, license fee, Octroi, road permits etc. incurred until delivery of the contracted Goods/services at the site of the user.

I.24. Fail-safe procedure

The vendor should indicate in detail the fail-safe procedure(s) for the following:

- Power failure
- Voltage variation
- Frequency variation
- Temperature and humidity variations.

I.25. Training:

For each goods/hardware and software component installed, the Vendor may be required to train the designated NIMS and user personnel to enable them to effectively operate the total system. The training, if required, shall be given, as specified in the SCC at the

locations specified. The training schedule will be agreed to by both parties during the performance of the Contract.

I.26. Site Preparation and Installation :

The bidder will designate to perform a site inspection to verify the appropriateness of the sites before the installation of every goods/hardware related item.

I.27. Patent Rights:

The supplier shall indemnify the purchaser against all third party claims of infringement of patent rights, trade mark, industrial design rights arising from the use of the goods or part thereof.

Bid letter form

From: Date:
(Registered name and address of the bidder.)

To:
The Director,
Nizam's Institute of Medical Sciences,
Punjagutta, Hyderabad-500 082,

Sir,

Having examined the bidding documents and amendments there on, we the undersigned, offer to provide goods/services/execute the works including supply, delivery and installation of goods in conformity with the terms and conditions of the bidding document and amendments there on, for the following equipments in response to your tender Notification No……., dated .....

Bidder's signature and seal.

Annexure – 1

List of equipments

S. No.	Department	Equipment	Qty	EMD
1	**Neurology**	ICU EEG System	One	Rs.75,000/-
2	**Neurology II Project**	Star Drive-DBS Application	One	Rs.80,000/-
3	**Jeevandan**	Portable ABG machine	Two	Rs.12,500/-
4	----do----	Portable EEG (32 Chananel)	One	Rs.25,000/-
5	**Nephrology**	Haemodialysis Machines	40 (Forty)	Rs.6,00,000/-
6	----do----	R.O.System with capacity of 2000 litres/hour	One	Rs.50,000/-
7	----do----	Portable R.O.System	One	Rs.12,500/-
8	----do----	Ultrasound with Doppler probe	One	Rs.87,500/-
9	**Surgical Gastroenterology**	Liver Transplant Retractor(Total 2sets for both Donor and Recepient) with Multi purpose Blade kits	One	Rs.25,000/-
10	----do----	Ultrasonic Aspirator	One	Rs.1,20,000/-
11	----do----	APC Coagulation Unit alongwith ElectroSurgery Unit incorporated as a System	One	Rs.14,000/-
12	----do----	Radiofrequency Ablation	One	Rs.37,500/-
13	----do----	Rapid Infusion System	One	--------
14	----do----	3D Laparoscopy System	One	Rs.1,00,000/-
15	**Biochemistry**	—20^{O}C Deep Freezer	One	----------
16	----do----	—80^{O}C Deep Freezer	One	Rs.5,000/-
17	----do----	Thin Layer Chromatography	One	----------
18	----do----	Manual Chromatography Chamber	One	----------
19	----do----	Elisa Reader and Washer	One	Rs.12,500/-
20	----do----	Hot air oven	One	----------
21	----do----	Osmometer	One	Rs.7,500/-
22	----do----	PCR Machine	One	Rs.12,500/-
23	----do----	Refrigerated Centrifuge	One	Rs.5,000/-
24	----do----	SDS Page System	3 (Three)	Rs.22,500/-
25	----do----	Semi Auto Analyzer	One	Rs.5,000/-
26	----do----	Stastistical Software	One	Rs.5,000/-
27	----do----	Urine Analyzer	One	----------
28	----do----	Water Bath	One	----------
29	**Urology**	COMPACT 17Fr 30° LENS	One	Rs.10,000/-
30	----do----	SACHE, urethrotome sheath,	One	----------

31	----do----	21Fr, with channel NEPHROSCOPE PAEDIATRIC	One	Rs.6,250/-
32	----do----	NEPHROSCOPE ADULT	One	Rs.6,250/-
33	----do----	RESECTOSCOPE SHEATH 26Fr	One	Rs.6,250/-
34	----do----	WORKING ELEMENTS – WORKING ELEMENT, SET – SINGLE STEM WORKING ELEMENT SET – DOUBLE STEM.	One	 Rs.3,000/- Rs.4,250/-
35	----do----	STONE CRUSHING FORCEPS	One	----------
36	----do----	TELESCOPE 30°	One	Rs.6,750/-
37	----do----	TELESCOPE 0°	One	Rs.6,500/-
38	----do----	URETERO RENOSCOPE, LENGTH 43 CM – 4.5 Fr 6 – 7.5 Fr 8 – 9.8 Fr	One	Rs.22,500/-
39	----do----	URETERO RENOSCOPE, LENGTH 34 CM–4.5 Fr 6 – 7.5 Fr 8 – 9.8 Fr	One	Rs.22,500/-
40	----do----	VISUAL OBTURATOR – SCHMIEDT	One	----------
41	----do----	3-CHIP ENDOSCOPIC CAMERA HD CAMERA	One	----------
42	----do----	SINGLE CHIP ENDOSCOPIC CAMERA	One	Rs.10,000/-
43	----do----	LED MONITER 26" HD	One	Rs.8,750/-
44	----do----	SACHSE MEATOTOME WITH SCALE TO SET CUTTING SIZES 10-36 Fr	One	----------
45	----do----	ELECTRO-HYDRAULIC **ESWL** MACHINE	One	Rs.1,00,000/-
46	----do----	ELECTRO SURGERICAL INSTRUMENT	One	Rs.20,000/-
47	----do----	6F SEMI REGID URETEROSCOPE	One	Rs.8,750/-
48	**Respiratory Medicine**	SPIROMETER DLCO	One	Rs.62,500/-
49	----do----	MEDICAL THORACOSCOPY	One	Rs.42,500/-
50	**Plastic Surgery**	Electrical Dermatome	One	Rs.17,500/-
51	----do----	Hand Operated Skin Graft Meshing Device	One	Rs.12,500/-
52	----do----	Nasal Endoscope	One	Rs.25,000/-
53	----do----	Electrically operated Micro driver with Cutting Tools	One	Rs.50,000/-

54	**Microbiology**	Walk in Cold Room	One	Rs.6,250/-
55	----do----	Bio-Safety cabinets Type 2 A2	6 (Six)	Rs.46,500/-
56	**Transfusion Medicine**	REFRIGERATOR for storage of Packed Red cell/Whole blood:	01	Rs.12,500/-
57	----do----	DOMESTIC REFRIGERATOR For Storage Of Reagents	3	Rs.4,500/-
58	----do----	CENTRAL TEMPERATURE MONITORING SYSTEM	1	Rs.5,000/-
59	----do----	NEEDLE DESTROYER:	2	---------
60	----do----	PLATELET AGITATOR WITH INCUBATOR	2	Rs.15,000/-
61	----do----	DEEP FREEZER TEMPERATURE RANGE - 40^{O} C.	4	Rs.40,000/-
62	----do----	AUTOMATED ELISA READER	1	Rs.15,000/-
63	----do----	ELISA WASHER	1	Rs.5,000/-
64	----do----	MICRO PIPETTES	5	----------
65	----do----	INCUBATOR	1	----------
66	----do----	LAB CENTRIFUGES	3	----------
67	----do----	HOT AIR OVEN	1	----------
68	----do----	AUTOMATED BLOOD COMPONENT SEPARATOR	1	Rs.62,500/-
69	----do----	TUBE SEALER	2	Rs.22,500/-
70	**CP&T**	HPLC Instrument	One	Rs.87,500/-
71	**Dr Vijay Kumar Project**	PCR machine	1	Rs.18,750/-
72	----do----	Denaturing Gradient Gel Electrophoresis	1	Rs.10,000/-
73	**Cardiology**	3 Channel ECG Machine	10 (Ten)	Rs.33,840/-
74	----do----	Multi channel Monitor	36 (Thirty Six)	Rs.2,83,500/-
75	----do----	Single Chamber Temporary Pulse Generator	10	Rs.25,000/-
76	**Hospital Administration**	100% ETO Sterilizer	1	Rs.62,500/-
77	**Neurosurgery**	Neuro Endoscope System	1	Rs.87,500/-
78	**Radiology**	Mammography System(Analog)	1	Rs.1,00,000/-
79	**Orthopaedics**	C-Arm	1	Rs.1,00,000/-

Annexure 2

Performance security form

(To be issued by any nationalised or scheduled bank in India and having at least one branch in Hyderabad)

To,
Executive Registrar,
NIMS, Hyderabad

WHEREAS ..... (Name of Vendor) hereinafter called "the Vendor" has undertaken, in pursuance of Notification of Award dated, ... (Date), to supply ..... called "the Contract".

AND WHEREAS it has been stipulated by you in the said Contract that the Vendor shall furnish a Bank Guarantee a recognised bank for the sum specified therein as security for compliance with the Supplier's obligations in accordance with the Contract.

WHEREAS we have agreed to give the Vendor a Guarantee:

THEREFORE WE hereby affirm that we are Guarantors and responsible to you, on behalf of the Vendor, up to a total of Rs. .....(Rupees.....) and we undertake to pay you, upon your first written demand declaring the Vendor to be in default under the Contract and without cavil or argument, any sum or sums within the limit of Rs..... (Amount of Guarantee) as aforesaid, without any need to prove or to show grounds or reasons for your demand for the sum specified therein.

This guarantee is valid until the ..... day of ..... (Date)

Place: Signature of guarantors
Date: and seal.

Annexure 3

Manufacturer authorisation

The authorisation may be in the nature of a letter, memorandum or certificate normally granted by the manufacturer to its channel partners, authorised Service providers, system integrators, distributors, etc. or a specific letter issued for purposes of this bid. However this will not applicable when bid is open only to manufacturers.

Such communication should include statements / undertakings from the said manufacturer to the following effect.

- Guarantee and warranty coverage in respect of the goods and services shall be honoured by their channel partners, distributors, authorised service centres as the case may be.
- The manufacturer updates the bidder and their technical personnel as and when required with relevant technical literature, training and skills.
- The manufacturer provides back to back technical support to the said bidder on a continuous basis.
- The said bidder is authorised to submit bid and provide warranty and maintenance service during the contract period.

Note: The letter of authority should be signed by a person competent and having the power of attorney to bind the manufacturer.

Annexure 4
Installation/Acceptance Certificate
(On letter head of Bidder)

1	Hospital name:			5	Invoice No/Date:	
2	Department Name:			6	Dc No/Date:	
3	Supplier Name:			7	Installation Date	
4	Po. No/Date:					

Sl. No.	Name of Equipment	Qty	Make	Model	Equipment Sl. No.	Warranty date	
						From	To

Remarks:

1	Signature of Head of Dept			6	Signature of Service Engineer:	
2	Doctor Name:			7	Service Engineer Name:	
3	Designation:			8	Designation:	
4	Department:			9	Mobile No.:	
5	Mobile No:			10	Service centre address :	

Certified by the concerned user Department HOD: Sr.BME, NIMS
Date and office seal:

Annexure 5

Performance Certificate after installation

(On Bidder Letter Head)

Date:_____

From

The HOD of concerned _____

NIMS

To

The Director, NIMS

Sub: Satisfactory Performance Certificate after 3 months from Installation Date

Ref: P.O. No._____, dt: ___.____.20

*****

The following details are furnished towards the Equipment items received from M/s. _____:

1	Item Description and Quantity	
2	Make and Model	
3	Supplied by	
4	Invoice Number/Date:	
5	DC Number/Date:	
6	Installation Date:	

7. Remarks on the Functioning**:**

Signature of Head of Dept:

Sr.B.M.E. NIMS

Doctor Name:

Designation:

Mobile No:

Note: The Hospital authorities shall submit this report along with a covering letter after expiry of warranty period on the release of Security Deposit subject to satisfactory working of the equipment.

Form - A

Bidder Information

1	Name of the organisation	
2	Date of establishment	
3	Registered Office Address	
4	Phone No.	
5	Fax No.	
6	Email	
7	Whether Manufacturer?	Yes/No, If yes, Provide relevant documents
8	Whether Authorised Dealer/ Service provider	Yes/No, If yes, Provide relevant documents
9	Details of EMD furnished	
10	Details of certificates enclosed.	

Place:
Date:

Bidder's signature
and seal.

Form - B

Turn over details of Item /product

(Irrespective of brand/make/model)

Sl. No.	Item Name	Financial Year	Nos. sold	Amount (Rs in Lakhs)

Place:
Date:

Bidder's signature
and seal.

Form -C

Turn over details of Item /product (Model offered in Bid)

Sl. No.	Item Name	Financial Year	Nos. sold	Amount (Rs in Lakhs)

Place:
Date:

Bidder's signature
and seal.

Form - D

Past Performance Details

Sl.No.	Customer Full address	Order No. and date	Description of goods	Total Value of goods	Due date of supply	Actual date of completion of supply

Form - E

Details of service centres at Hyderabad

Sl.No.	Full Address of service centre	Contact person name with phone No.

Form P5

Past Experience Certificate

(Certificate from the Statutory Auditor)

This is to certify that..... (name of the Bidder) is a "Primary Manufacturer/Authorized Distributor' of medical equipment offered under the Bid. The Bidder had supplied the quantities shown in the past performance statement and also completed the respective supplies as indicated in bid.

Further it is certified that the previously supplied equipment are reported to be in working condition for more than two years as on bid calling date without any adverse remarks from the respective users.

The bidder has got previous experience in maintenance and repairs of equipment for _____ years and has qualified service staff working with him".

Name of Authorized Signatory:
Designation:
Name of firm:
(Signature of the Authorized Signatory)

Form - G

Financial Capacity of Bidder

(Certificate from Statutory Auditor)

- Details of Annual Turnover for last three Financial years along with copies of balance sheet for the respective years.

	Year 1	Year 2	Year 3
Turnover (Rs. In Cr.)			

Place: Bidder's signature
Date: and seal.

Signature of Statutory Auditor with seal

Form - H

Declaration Form

I / We …….. having Our …….. office at …….. read and understood the terms and conditions contained in the bidding documents under this notification for bid and offer our bids unconditional, to the extent not stated at any other part of our bid.

We will not quote or supply the goods similar to the ones offered under this bid notification to any agency or organization in the country, at the rate lower than the rate quoted in this present tender.

If we were found quoting lower rate than the rate quoted to the NIMS, to any other agency in the country during the validity of the present contract, we will remit the differential cost to the NIMS, unconditionally.

Place:
Date:

Bidder's signature
and seal.

Form - I

Specification required & Specifications proposed

Sl. No.	Item	Specification Required	Specification of proposed item	Specification Higher/Lower

Form - J

Check List

Compliance/ agreed/ enclosed/ deviation statement.

The following are the particulars of compliance/deviations from the requirements of the tender specifications.

Sl. No.	Bid document reference	Remarks
1	Delivery period	
2	Form P-1	
3	Form P-2A	
4	Form P-2B	
5	Form P-3	
6	Form P-4	
7	Form P-5	
8	Form P-6	
9	Form P-7	
10	Form T-1	
11	Form T-2	
13	Form T-3	
14	Form F-1	

15	Form F-2	
16	Pre-qualification criterion	
17	Technical specifications	
18	Financial bid format	
19	General instruction to bidders	
20	Standard procedure for bid evaluation	
21	General condition of proposed contract(GCC)	
22	Special Conditions	

The specifications and conditions furnished in the bidding document shall prevail over those of any other document forming a part of our bid, except only to the extent of deviations furnished in this statement.

Place: Bidder's signature

Date : and seal.

NOTE: For every item appropriate remarks should be indicated like 'no deviation', 'agreed', 'enclosed' etc. as the case may be..

Form –K

Fee details

Sl. No.	Description	
1	Tender Application fee instrument	
2	Process Fee Instrument	
3	EMD Instrument	

Place:
Date:

Bidder's signature and seal.

Form - L

Financial Bid
Cost of Equipment and Comprehensive Maintenance Charges in Rs.

Table-I

Sl. No.	Equipment details	Total Unit Cost	Numbers	Total Cost for all Numbers	Comprehensive maintenance charges for 7 years	*Net Present Value of Total Purchase cost and Total Comprehensive Maintenance charges for 7 years
1 2 3						
4						
	Total					

Table-II

Sl. No.	Equipment details	Total Unit Cost	Numbers	Total Cost for all Numbers	Annual Maintenance charges for 7 years	*Net Present Value of Total Purchase cost and Total Comprehensive Maintenance charges for 7 years
1						
2						
3 4	Total					

Place: Bidder's signature

Date : and seal.

Note:
For the purpose of financial bid evaluation, NPV of Purchase cost and maintenance charges shall be taken into consideration. However payment will be made as per bid conditions.

END OF DOCUMENT